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Welcome

Congratulations on your purchase of this Sony VAIO® computer, and welcome tocomputer the online VAIO® Computer User Guide.
This user guide provides detailed information on all aspects of using your new VAIO computer, from keyboard functions to preinstalled software applications.
In the left navigation window, click the topics you want to learn more about, and that information will be displayed in this main window.

✍ Click here to find the latest updates and supplemental information about your computer.

Click here to view your computer's hardware specifications and software information.

Using Your VAIO Computer

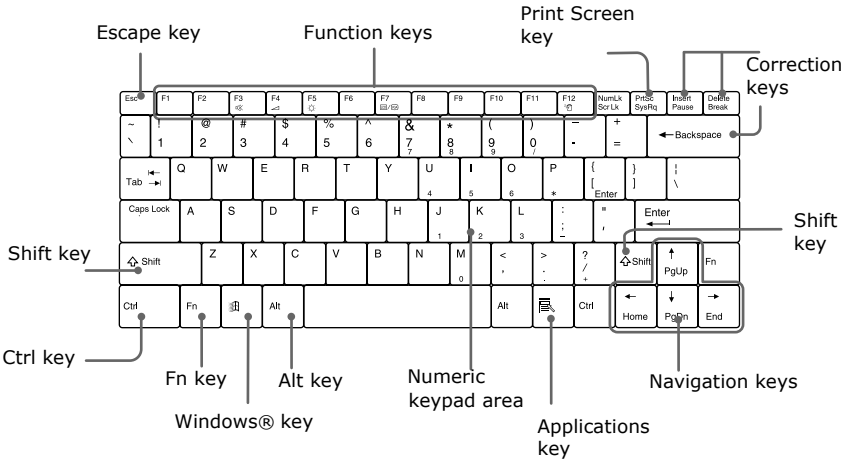
This section describes the following aspects of your new computer:

- Using the Keyboard
- Using VAIO Action Setup
- Using the Jog Dial Control
- Using Memory Stick Media
- Using PC Cards
- Using Power Saving Modes
- Connecting a Phone Line
- Connecting to a LAN
- Connecting to a Wireless LAN

Using the Keyboard

Your keyboard is very similar to a typewriter's, but your computer keyboard has additional keys that perform specific computer-related tasks.

Keyboard



Functions of the keyboard keys

Key	Description
Numeric keypad area	Contains the keys found on a typical calculator. Use the numeric keypad area to type numbers or to perform mathematical calculations such as addition and subtraction. Numbers appear on the front beveled edge of the numeric keys. Note that you must press the Num Lock key to activate the numeric keypad. (When you do so, the Num Lock light will be on.)
Navigation keys	Several keys are devoted to moving the cursor on the screen (the four arrow keys which also function as the Home, End, Page Up, and Page Down keys).
Correction keys	The Insert, Backspace, and Delete keys enable you to make corrections in your documents.
Function keys	The twelve function keys along the top of the keyboard are used to perform designated tasks. For example, in many applications, F1 is the Help key. The task associated with each function key may vary from one application to the next.
Escape key	The Esc (Escape) key is used to cancel commands.
Print Screen key	The Print Screen key takes an electronic snapshot of the screen and places it in the Windows® Clipboard. You can then paste the screen shot into a document and print it.

Key	Description
Operator keys (Shift, Ctrl, Alt keys)	Several keys are always used with at least one other key: Ctrl, Alt, and Shift. When held down with another key, the Ctrl (Control) and Alt (Alternate) keys offer another way to give commands. For example, in many applications, instead of choosing the Save command from a menu, you can hold down Ctrl and press the S key (referred to as Ctrl+S). The Shift key operates the same way as on a typewriter; it is used to produce capital letters or special symbols, such as @ and $.
Windows® key	The key with the Windows® logo displays the Windows® Start menu; it's the equivalent of clicking the Start button on the taskbar. See "Combinations and functions with the Windows key" for more information.
Fn key	The Fn key is used in combination with other keys to issue commands. The Fn keys at the left and right sides both work the same. See "Combinations and functions with the Fn key" for more information.
Applications key	The Applications key displays a shortcut menu of context-sensitive choices. Pressing this key is the equivalent of clicking the right mouse button.

Combinations and functions with the Windows key

Combination	Function
+ F1	Displays VAIO® Help and Support Center.
+ Tab	Switches the selected button on the taskbar.
+ E	Displays Windows® Explorer.

Combination	Function
+ F	Displays the Search window to find a file or folder. This is the equivalent of selecting Search from the Start menu.
+ Ctrl + F	Displays the Search Results: Computers window where you can locate other computers. This is the equivalent of selecting Search and then Computers from the Start menu.
+ M	Minimizes all displayed windows (with Num Lock off).
Shift + + M	Returns all minimized windows to their previous size.
+ R	Displays the Run window. This is the equivalent of selecting Run from the Start menu.
Fn + + Insert	Displays the System Properties window. This is the equivalent of selecting Control Panel and then System from the Start menu.

Indicators

Indicator	Function
Power	Light is green when the power to the computer is turned on, flashes amber in Standby mode, and turns off when the computer is in Hibernate mode or powered off.
Battery	Indicates the status of the battery inserted in the computer.
Hard disk	Lights when data is read from or written to the hard disk drive. Do not enter Standby mode or turn off the computer when this indicator light is on.

Indicator	Function
Wireless LAN	Wireless LAN capability is functioning when the indicator is lit.
Memory Stick®	When indicator is lit, data is read from or written to the Memory Stick media. (Do not enter Standby mode or turn off the computer when this indicator light is on.) When indicator is off, the Memory Stick media is not being accessed.
Num Lock	The number keys area in the numeric keypad are active when indicator is lit. When indicator is off, the alphanumeric character keys in the keypad area are active.
Caps Lock	When indicator is lit, the letters appear in uppercase as you type. The Shift key lowers the case of typed letters when Caps Lock is on. When indicator is off, the letters appear in lower case as you type (unless you hold down the Shift key).
Scroll Lock	When indicator is lit, the screen scrolls differently. (Exactly how it scrolls depends on the specific application. This function does not work with all applications.) When indicator is off, information moves across the display normally.

Combinations and functions with the Fn key

✍ If you switch user identities during a computing session, the Fn+F7 key functionality (if available on your computer) will be interrupted. To switch to an external display or monitor, see “Selecting the Display Mode” for more information.

Combinations/ Feature	***Functions***
Fn+ (ESC) Standby	Puts the system into Standby mode, a power management state. To return the system to the active state, press any key on your computer.
Fn+ (F3) Speaker switch	Toggles the built-in speaker off and on.
Fn+ (F4) Speaker volume	Adjusts the built-in speaker volume. To increase volume, press Fn+F4, then ↑ or →. To decrease volume, press Fn+F4, then ↓ or ←.
Fn+ (F5) Brightness control	Adjusts the brightness of the LCD. To increase light intensity, press Fn+F5 and then ↑ or →. To decrease light intensity, press Fn+F5 and then ↓ or ←.
Fn+ LCD VGA (F7) Switch to the external display	Toggles between the LCD, external display (connected to the Monitor port), and both LCD and external display modes. Only LCD → LCD and external display → Only external display → Only LCD

Combinations/ Feature	***Functions***
Fn+ (F12) Hibernate	Provides for the lowest level of power consumption. When you execute this command, the state of the system and state of the peripheral devices are written to the hard disk and the system power is turned off. To return the system to the original state, press the power button briefly to turn on the power.
Fn+B Bass Boost	Toggles the bass-boost function off and on. This feature is available only while using headphones.
Fn+ F	Display control. Minimizes and maximizes the LCD screen. If the default display resolution is reduced, this function maximizes the display resolution to fit the screen size. Maximizing the display screen enables you to view the display at a greater resolution.

✍ Some functions are not available until Windows® launches.

Using VAIO Action Setup

VAIO Action Setup manages the settings for your computer's Jog Dial™ control, **Memory Stick®** **media**, and i.LINK® interface. An overview of some of the functions controlled by VAIO Action Setup is provided below. For more information on changing the settings using VAIO Action Setup, right-click the Jog Dial control icon or , in the task tray and click Help Topics.

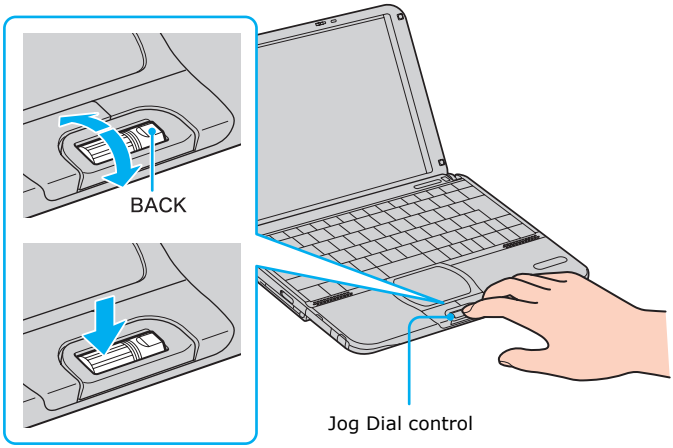
VAIO Action Setup functions

- **Jog Dial —** Changing the Jog Dial setting
- **Memory Stick —** Changing the Memory Stick media insertion setting
- **i.LINK —** Changing the i.LINK device connection setting
- **USB —** Changing the USB device connection setting
- **Timer —** Setting the timer

Using the Jog Dial Control

Your computer is equipped with a Jog Dial™ control on the bottom center portion of the unit. The Jog Dial control enables you to open an application, folder, or document from a predefined list by rotating and pressing the Jog Dial control. In addition, when you press the Jog Dial control, you can turn on your computer automatically and start the selected application or document.

Using the Jog Dial Control



The Jog Dial control window always appears in the display. It is either in the launcher mode or in the guide mode.

For information on how to change the Jog Dial control's settings, right-click the Jog Dial control icon in the task tray and click Help Topics.

Launcher mode

The Jog Dial control window is in launcher mode until a software application is launched or the Jog Dial control window becomes active. When an arrow is displayed next to an item in the Jog Dial control window, you can display a submenu of that item by selecting it and pressing the Jog Dial control button.

Using Launcher mode

To use the Jog Dial control, click the Jog Dial control window or the Jog Dial control icon in the task tray. Alternatively, you can press the Jog Dial control while pressing the Ctrl key on the keyboard to switch to the launcher mode.

1 Turn the Jog Dial control to select the item you want, then press the Jog Dial control. The window switches to the guide mode, and shows the Jog Dial control's function.

Jog Dial Launcher Dialog Box

2 Turn or press the Jog Dial control to use the desired function.

3 To select another item, switch to the launcher mode and repeat from step 1.

Guide mode

The Jog Dial control window is in the guide mode when software is in use and the software window is active. Depending on the software you are using, you can select items from the displayed list using the Jog Dial control. Some Sony software applications have two modes in List View, Simple Menu, and Full Menu. You can switch the mode by pressing the Shift key while turning the Jog Dial control.

Using guide mode

The Jog Dial control window displays the Jog Dial control's function.

To use the Jog Dial control with Sony software

If Sony software that supports the Jog Dial™ control is active, you can use the Jog Dial's functions that are allocated to that software. For more information on functions allocated to software, see the software application's online Help.

To use the Jog Dial control with other software

If the software you are using does not support the Jog Dial control, you can still perform the following functions:

Action	Description
Maximize Window*	Press the Jog Dial control button to maximize the size of the active window. Press again to return to normal window size.
Minimize Window*	Press the Jog Dial control button to minimize the size of the active window. Press again to return to normal window size.
Finish Window*	Press the Jog Dial control button to close the active application.
Scroll*	Press the Jog Dial control button to begin scrolling within the active window.
Jog Dial Launcher	Press the Jog Dial control button to return the Jog Dial control to Jog Launcher mode.
Menu Bar	Press the Jog Dial control button, then use the Jog Dial control to scroll through the active window's toolbar.

* Some software applications do not support these functions.

Using a dialog box

When a window such as Screen Properties is active, the Dialog box is displayed in the Jog Dial™ window. You can select an item in the window by rotating the Jog Dial control. Pressing the Jog Dial control is the equivalent of pressing Enter.

Jog Dial Guide Dialog Box

Internal timer

You can use the internal timer to start an application at a specific time. The timer, when set, can launch applications even when the computer power is off.

1. Rotate or push the Jog Dial™ control, and select VAIO Action Setup in the Jog Dial Launcher window.
2. Click Timer from the left menu, then click the clock icon.
3. Select either Recommended Settings, Program Files, All Files, or Drag & Drop from the left menu, then select the file or application you wish to launch in the right window.
4. Click Next until the One-Time-Only Setting dialog box appears.
5. Select the Date and Time and click Next twice, then click Finish and close the VAIO Action Setup window.

Using Memory Stick Media

This new compact, portable, and versatile recording medium has a data capacity exceeding that of a floppy disk. The media is specially designed for exchanging and sharing digital data with compatible products. Because it is removable, the media can be used for external data storage.

Types of Memory Stick media

Two types of Memory Stick® media are available. The first type, MagicGate™ Memory Stick media (hereafter referred as MG Memory Stick media), is provided with copyright protection. (The MG Memory Stick media are colored white.) The second type, simply referred to as Memory Stick media, does not have the same copyright protection as MagicGate. (The Memory Stick media are colored purple.)

You can use both media with your computer.

For music, which requires copyright protection, you can only use MG Memory Stick media with your computer. You can also use compatible MagicGate devices to record and play back music when they are connected to your computer.

You can store mixed data on the Memory Stick media. For example, you can copy an image onto MG Memory Stick media that already contains music.

What is MagicGate?

MagicGate technology is copyright protection that consists of authentication and encryption technology. Authentication technology ensures that protected content is only transferred between compliant devices and media. Protected content is recorded and transferred in an encrypted format to prevent unauthorized duplication or playback.

✍ Ensure that the MG Memory Stick media has the MG mark .

To insert a Memory Stick media

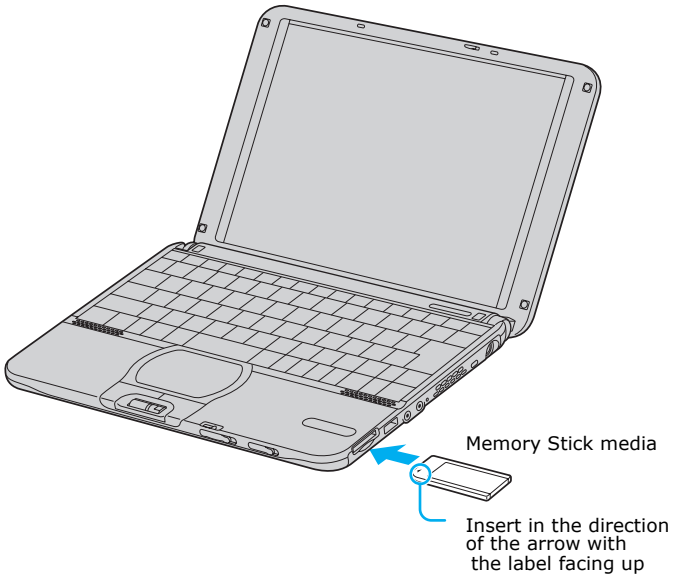
Insert the Memory Stick media into the media slot on the right side of the computer until it clicks into place. When the Memory Stick media is properly in place, Sony's VisualFlow™ software will automatically launch to display the contents of the Memory Stick.

1 Insert with the arrow facing toward the Memory Stick® media slot and the label facing up.

> **Inserting the media in the wrong direction may damage the connector pins.**
>
> **Hold the Memory Stick media with the arrow pointing in the correct direction and then turn it so the label side is down before inserting into the slot. To avoid damaging the computer or the Memory Stick Media, do not force the Memory Stick media into the slot.**

2 Carefully insert the Memory Stick media until it clicks into place.

Inserting Memory Stick



To view the contents of Memory Stick media

To see the contents, do the following:

1 Click Start on the Windows® taskbar, and select My Computer.

2 Under the heading "Devices with Removable Storage," click Sony Memory Stick.

To remove a Memory Stick media

Make sure the access light is off. Push the media in toward the computer. When the media ejects, pull it out. When removing the Memory Stick media, be careful as it may eject completely from the slot.

VisualFlow

VisualFlow software is a state-of-the-art Sony multimedia browser designed specifically for Memory Stick media.

To use VisualFlow

1 From the Start menu, point to All Programs, and select VisualFlow.

✍ VAIO Action Setup has been configured to launch VisualFlow by default upon insertion of Memory Stick media. VisualFlow software starts automatically when Memory Stick media is put into the drive.

2 Click on an icon in the View section on the main toolbar to select a display layout.

3 Click on an icon in the Sort section on the main toolbar to select a sorting method.

4 Resting your cursor on the left end of the main toolbar activates the current Memory Stick properties.

5 Resting your cursor on the right end of the main toolbar activates a secondary toolbar with more functions.

6 Click an image to show a normal view centered on the screen.

- ❑ Double-click an image to show an enlarged view.

7 Movie files start playback when the view is enlarged. Click again on movie files to restore the view to normal.

✍ While an image is enlarged, the Launch toolbar appears on the bottom of the window. Any associated application can be activated from here.

Notes on using Memory Stick media

- When the media's write-protect tab is set to LOCK, data cannot be recorded or erased.
- Before using Memory Stick media, you should back up important data.
- Wait a minimum of 10 seconds after the media finishes reading or writing data before removing it. If the media is removed prematurely, an error message appears, prompting you to continue or exit. Reinsert the media into the slot and press Enter to continue. This enables the media to finish reading or writing data.
- You can enjoy video clips that you have recorded with compatible Memory Stick digital camcorders.
- The media slot can accommodate one media at a time.
- To copy images from a digital video camera via Memory Stick® media, see "Connecting an i.LINK AV Device" for more information.
- Only MG™ Memory Stick media can be used with copyright protected data like music.
- Do not remove the media or turn off the power while the access light is on.
- Do not use the media in locations that are subject to static electricity or electrical noise.
- Do not touch the media connector with your finger or metallic objects.
- Do not attach labels other than the supplied label to a media.
- Do not bend, drop, or shock the media.
- Do not disassemble or modify the media.
- Do not allow the media to get wet.
- Do not use or store the media in a location that is subject to:
  - Extremely high temperatures, such as in a car parked in the sun.
  - Direct sunlight.
  - High humidity or places with corrosive substances.

To prolong the life of the media, use the supplied storage case. See the instructions supplied with your media for more information on its use.

Using PC Cards

Your computer includes a PC Card slot. PC Cards enable you to connect portable external devices, such as an optical disc drive.

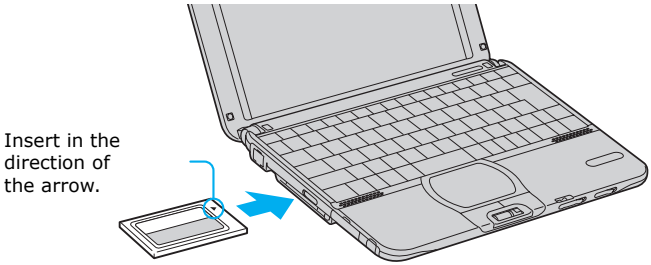
✍ The PC Card slot can accommodate a Type I or Type II PC Card. This slot is compatible with Card Bus. Type III PC Cards are not supported.

To insert PC card

✍ You do not need to shut down the computer before inserting or removing a PC Card.

1 Insert the PC Card into the PC Card slot with the front label facing up.

Inserting PC Card



2 Gently push the PC Card into the slot until it is firmly seated in the port and the release button pops out.

⚠ **Do not force a PC Card into the slot. It may damage the connector pins.**

When a PC Card is inserted, do not place your computer in a bag or case. Pressure or shock to a PC Card may damage your computer.

Touching the head of the PC Card will not cause damage to the connector pins, but damage can occur if the head of the PC Card is sticking out of the computer while the unit is being transported.

To remove a PC Card

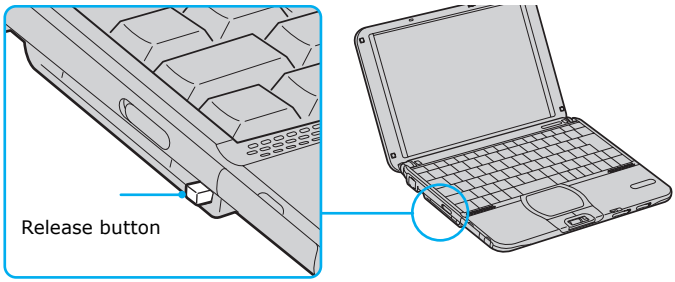
Follow the procedure below when you remove the PC Card while your computer is on. Failure to follow this procedure may result in a malfunction. If your computer is turned off, you do not have to follow these instructions.

1 Double-click in the task tray. The "Safely remove ... PC Card" dialog box appears.

2 Click the dialog box. The message, "Safe to Remove Hardware" appears.

3 Click to close the message.

Release Button



4 Press the release button toward the computer. The PC Card pops out.

5 Gently grasp the PC Card and pull it out.

Notes on PC Cards

- For some PC Cards, if you alternate between normal power operation and the Standby or Hibernate power management modes while the card is inserted, you may find that a device connected to your system is not recognized. Restart your system to correct the problem.
- Some PC Cards may require that you disable idle devices when using the PC Card. You can use Sony Notebook Setup to disable devices. See "Displaying the Sony Notebook Setup Screen" for more information.

- Be sure to use the most recent software driver provided by the PC Card manufacturer.
- If an exclamation mark (!) appears on the Device Manager tab in the System Properties dialog box, remove the software driver and then reinstall it.
- You may not be able to use some PC Cards or some functions of the PC Card with this computer. If you have difficulty inserting a card, check that you are orienting the card correctly. See the manual supplied with your PC Card for more information on its use.

Using Power Saving Modes

When you use a battery as the source of power for your computer, you can take advantage of power management settings to conserve battery life. In addition to the normal operating mode, which enables you to turn off specific devices, your computer has two distinct power saving modes: Standby and Hibernate. When using battery power, be aware that the computer automatically enters Hibernate mode when the remaining battery charge drops below 5 percent, regardless of the power management setting you select.

✍ If the battery level falls below 10 percent, you should either attach the AC adapter to recharge the battery or shut down your computer and insert a fully charged battery.

Normal mode

Normal mode is the normal state of your computer when it is in use. The power indicator displays green when your computer is in this mode. To save power, you can turn off a specific device such as the LCD or the hard disk.

Standby mode

In Standby Mode the computer saves the current state of the system in RAM and switches off power to the CPU. The amber power indicator flashes in this mode.

To activate Standby mode

1. Press the key combination Fn+Esc. You can also use the PowerPanel™ utility to enter Standby mode.
2. Press any key to return to normal mode.

Hibernate mode

In the Hibernate mode, the state of the system is saved on the hard disk drive and power is turned off. The power indicator is off in this mode.

To activate Hibernate mode

1 To activate Hibernate mode, press the key combination Fn+F12, or press the power button and release it immediately. The "Save to Disk Manager" screen appears and the computer enters Hibernate mode.

✍ Do not move the computer until its power indicator turns off.

2 Press the power button to return to normal mode.

Notes on power saving modes

- ❑ Standby uses more power than Hibernate.
- ❑ Standby requires less time than Hibernate to return to normal mode.

Connecting a Phone Line

You need to connect a phone cable (not supplied) to take advantage of online services and the Internet.

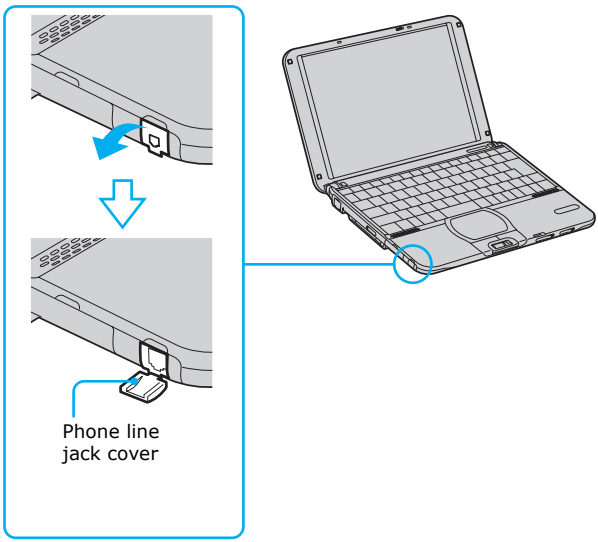
✍ In order to register your VAIO® computer, register your software online, and use Sony Customer Support, you must connect to a phone line.

How to connect a phone cable

1 Open the phone line jack cover, located on the left side of the computer near the front.

⚠ **Use care when opening the phone jack cover. Opening it too far may result in damage to the unit.**

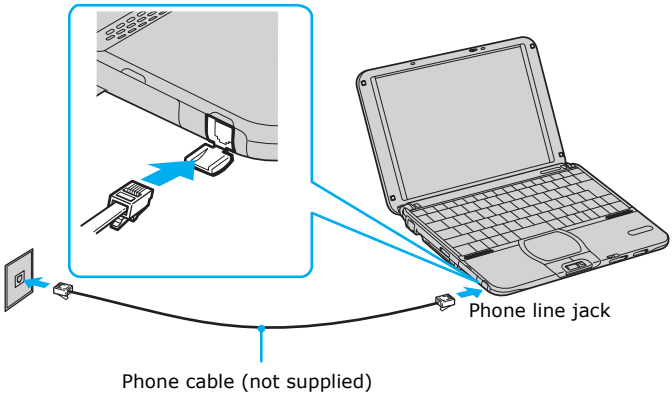
Opening Phone Line Jack Cover



2 Plug one end of the phone cable into the jack on the inside of the phone line jack cover. Make sure you insert the phone cable from the rear of the computer and that the modular jack clicks into place.

3 Plug the other end into the wall jack.

Plugging in Phone Cable



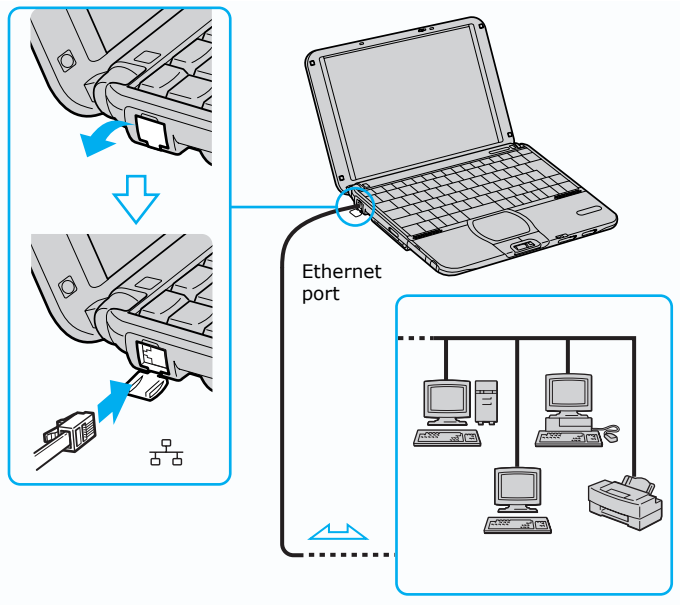
✍ Your computer does not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple phone lines or a private branch exchange (PBX). Some of these connections may result in excess electrical current and could cause a malfunction in the internal modem.

If you connect a phone line coming through a splitter, the modem or connected device may not work properly.

Connecting to a LAN

You can connect your computer to 10BASE-T and 100BASE-TX-type Local Area Networks (LANs) by using the computer's Ethernet port. For the detailed settings and devices needed to connect to the network, ask your network administrator.

Connecting to LAN



Warning: Only connect 10BASE-T and 100BASE-TX cables to the Ethernet port. Do not connect any other type of network cable or any telephone line. Connecting cables other than those listed above may result in an electric current overload and could cause a malfunction, excessive heat, or fire in the port. To connect the unit to the network, contact your network administrator.

If you enable Wake on LAN, the power saving mode will be switched to Standby mode.

To connect to a network

1. Click Start, select My Computer, and click My Network Places under the Other Places header.
2. Click "Add a network place" under the Network Tasks header, or click "Set up a home or small office network," depending on your configuration.
3. Depending on your choice, either the The Add Network Place Wizard or Network Setup Wizard is displayed.
4. Follow the step-by-step instructions that appear on the screen.

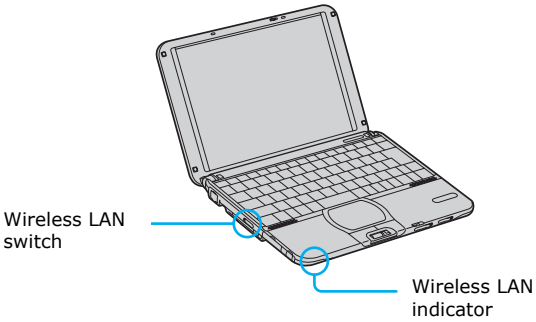
Connecting to a Wireless LAN

Your computer is equipped with a built-in mini PCI card that allows for wireless connections. With Sony's Wireless Local Area Network (LAN) functionality, all compatible digital devices can communicate freely without cable connections. A Wireless LAN is a network in which a mobile user can connect to a LAN through a wireless (radio) connection. You can opt to purchase a Wireless LAN Access Point to set up a LAN.

Turning On Wireless LAN

To enable Wireless LAN functionality, first locate the Wireless LAN switch that is located on the left side of the computer, above the PC Card slot. Move the switch to the ON position. The Wireless LAN indicator on the bottom left front portion of the computer lights up.

Connecting to a wireless LAN



The Wireless LAN Access Point

The Wireless LAN Access Point, which is also called the Access Point, is designed for building a Wireless LAN environment. If you purchase an Access Point, you can easily build a wireless LAN environment by plugging the Access Point into an AC power outlet, and using the provided software with compatible devices. Because a wireless LAN configuration requires no wiring, you can operate multiple computers more freely than ever before.

You can also connect an Access Point to a telephone line, Integrated Services Digital Network (ISDN) router, cable modem, or Digital Subscriber Line (xDSL) modem to share access to the Internet among multiple computers.

✍ For information on available Sony products, go to: http://www.sonystyle.com/vaio.

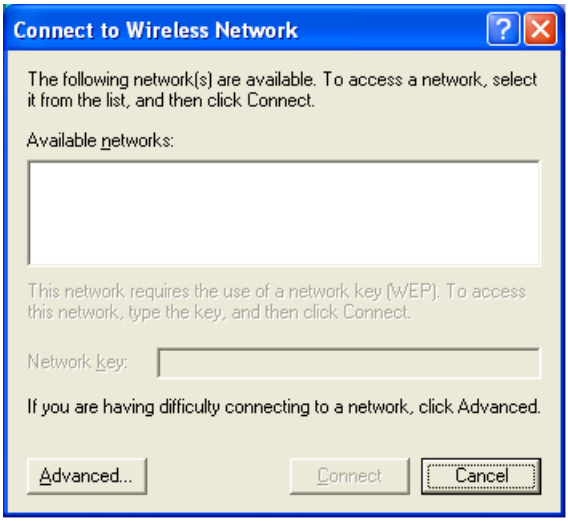
Communicating with Access Point (infrastructure)

An infrastructure network is one that extends an existing wired local network to wireless devices by providing an Access Point. The Access Point bridges the wireless and wired LAN, and acts as a central controller for the Wireless LAN. The Access Point coordinates transmission and reception from multiple wireless devices within a specific range.

To communicate with an Access Point

1. Turn on the Wireless LAN switch located on the left side of the computer, above the PC Card slot. The Wireless LAN indicator on the bottom left front portion of the computer lights up.
2. Right-click the Wireless Network Connection icon in the taskbar.
3. Click View Available Wireless Networks. The Connect to Wireless Network dialog box appears.

Connecting to a wireless LAN

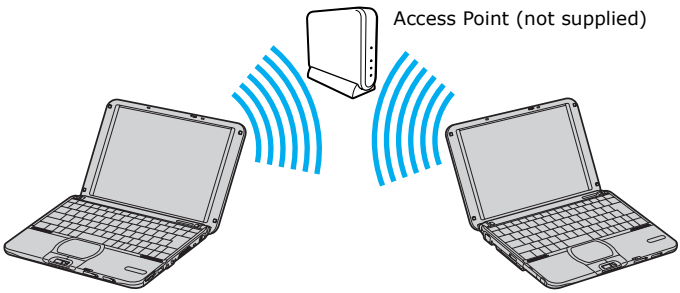

Connect to Wireless Network
The following network(s) are available. To access a network, select it from the list, and then click Connect.
Available networks:
This network requires the use of a network key (WEP). To access this network, type the key, and then click Connect.
Network key:
If you are having difficulty connecting to a network, click Advanced.
Advanced...
Connect
Cancel

4 Select the network you want to use.

5 Type the Network Key. See your network administrator for this information.

6 Click Connect.

Communicating via Wireless LAN Access Point



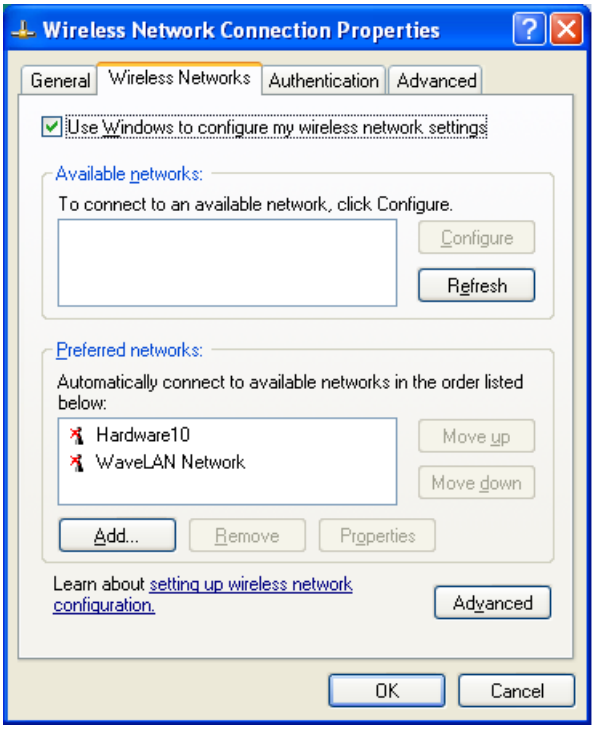
Communicating without Access Point (ad-hoc)

An ad-hoc network is one in which a local network is created only by the wireless devices themselves, with no other central controller or Access Point. Each device communicates directly with other devices in the network. You can set up an ad-hoc network easily at home.

To communicate without an Access Point, proceed as follows:

1. Turn on the Wireless LAN switch located on the left side of the computer, above the PC Card slot. The Wireless LAN indicator on the bottom left front portion of the computer lights up.
2. Right-click the Wireless Network Connection icon in the taskbar.
3. Click View Available Wireless Networks. The Connect to Wireless Network dialog box appears.
4. Click the Advanced button. The Wireless Network Connection Properties dialog box appears.

Setting Wireless Network Connection Properties



5 Select the Wireless Networks tab.

6 Click the Add... button. The Wireless Network Properties dialog box appears.

7 Enter a Network name (SSID). Choose a 6-digit name.

8 Check the box to select Data encryption (WEP enabled).

9 Check the box to select Network Authentication (Shared mode).

10 Clear the box to deselect the option "The key is provided for me automatically." Some information boxes become visible.

11 Fill in the Network key. Choose a 5-digit name.

12 Click OK. Your new Network name appears in the Preferred networks window.

13 Click Advanced. The Advanced dialog box appears.

14 Select the option "Computer-to-computer (ad hoc) networks only."

15 Click Close.

16 Click OK.

Turning Off Wireless LAN

To turn off Wireless LAN functionality, locate the Wireless LAN switch that is located on the left side of the computer, above the PC Card slot. Move the switch to the OFF position. The Wireless LAN indicator on the bottom left front portion of the computer turns off.

> ⚠ **Turning off the Wireless LAN functionality while accessing remote documents, files, or resources may result in data loss.**

Notes on using Wireless LAN

- Sony Wireless LAN devices support the IEEE802.11b standard. Devices connecting to a Wireless LAN using the IEEE802.11a standard cannot connect to devices using the IEEE802.11b standard.
- Wireless LAN communication occurs on divided frequency bands known as channels. Third-party Wireless LAN Access Point channels may be preset to different channels from Sony devices.
- If using a Wireless LAN Access Point, refer to connectivity information contained in those instructions.

Connecting Peripheral Devices

You can add functionality to your computer by connecting a variety of peripherals, as discussed in the following sections:

- Connecting a Floppy Disk Drive
- Connecting a PC Card Bus Drive
- Connecting an i.LINK Optical Disc Drive
- Connecting a USB Mouse
- Connecting VAIO Computers
- Connecting an i.LINK AV Device
- Connecting an External Display
- Connecting a USB Printer
- Connecting an External Microphone
- Connecting External Speakers
- Expanding Your Computer's Capabilities

Connecting a Floppy Disk Drive

You can connect an optional floppy disk drive (FDD) to the USB port on your computer.

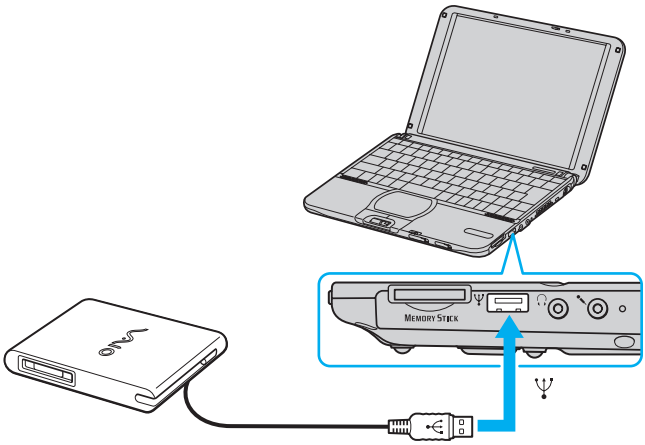
To connect the floppy disk drive

✍ You do not need to shut down the computer before connecting or disconnecting the floppy disk drive.

Before removing the FDD, see "To remove the floppy disk drive when the computer is on" for more information.

Plug the USB cable from the floppy disk drive into the USB port on the computer. The VAIO® logo on the disk drive should be facing up.

Plugging in USB Cable

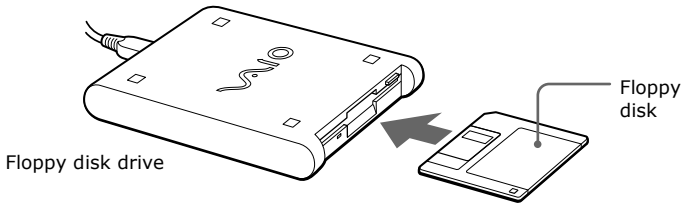


To insert a floppy disk

1 Hold the floppy disk with the label side facing up.

2 Gently push the floppy disk into the drive until it clicks into place.

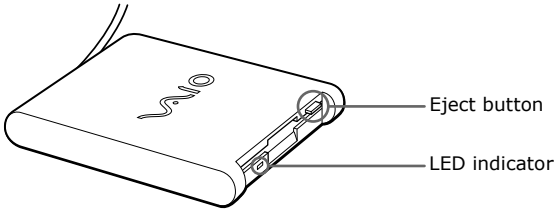
Inserting a floppy disk



To remove a floppy disk

- When you finish using the floppy disk, wait until the LED indicator light turns off, and then press the Eject button to remove the disk.

Removing a floppy disk



To remove the floppy disk drive when the computer is on

1. Double-click the Remove Hardware icon in the task tray.
2. The "Unplug or Eject Hardware" dialog displays.
3. Select the hardware device you wish to remove by clicking it.
4. Click Stop.
5. Confirm the correct device is selected in the "Stop a Hardware device" dialog box.
6. The message, "Floppy Disk Drive can now be safely removed from the system" appears. Click OK.

7 Unplug the floppy disk drive from the computer.

To carry the floppy disk drive

Fold the floppy disk cable into the compartment on the right side.

Notes on handling floppy disks

- Do not open the shutter manually and touch the surface of the disk.
- Keep disks away from magnets.
- Keep disks away from direct sunlight and other heat sources.

Connecting an i.LINK Optical Disc Drive

You can use an optional i.LINK®* optical disc drive, such as a Sony DVD-ROM or CD-RW/DVD Combo Drive (PCGA-CRWD1), with your computer. This Sony VAIO® computer is preinstalled with software that enables you to create CDs and play DVD movies. The i.LINK optical disc drive draws power from the computer through the power cable that is integrated with the VAIO computer Peripheral Cable. This peripheral cable connects to both the i.LINK port and peripheral cable DC Out jack on the left side of the computer.†

✍ If you use an optional drive when your computer is running on battery power, the battery life will be shorter.

To connect an i.LINK optical disc drive

Use a VAIO® Computer Peripheral Cable (supplied with the i.LINK drive) to connect the optical disc drive to the computer.

✍ Before connecting or disconnecting this drive, close any active applications to help prevent data loss.

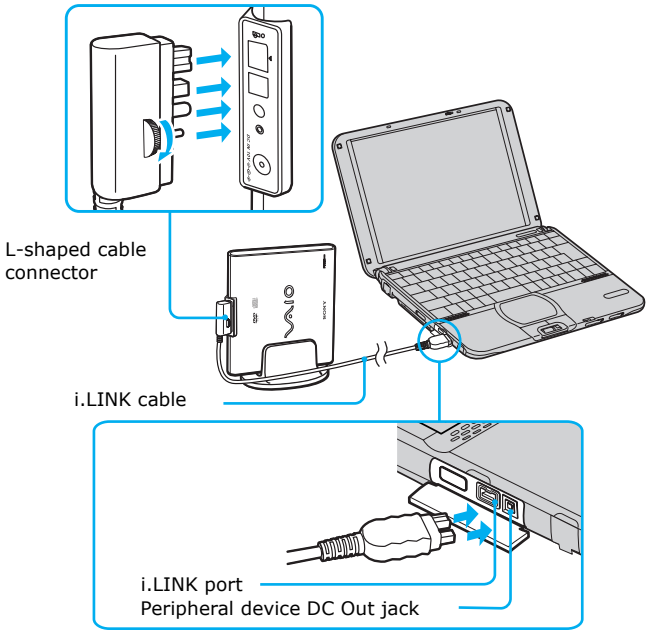
1 Turn on power to the computer. Insert the L-shaped plug of the VAIO® Computer Peripheral Cable into the matching jack on the rear of the i.LINK

* i.LINK is a trademark of Sony used only to designate that a product contains an IEEE1394 connection. The i.LINK connection may vary, depending on the software applications, operating system and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

† If you connect and use an optional drive when your computer is running on battery power, the battery life will be reduced.

drive. Secure the plug by turning the screw on the cable connector clockwise.

Connecting i.LINK optical disc drive



2 Insert the straight-shaped, two-prong plug of the VAIO® computer peripheral cable into both the computer's i.LINK port and peripheral device DC Out jack.

3 The i.LINK drive's power indicator lights up, and the computer will automatically detect and identify the connected drive.

4 Click Start on the Windows® taskbar, and select My Computer to verify that an icon for the i.LINK optical disc drive has been added in the window.

✍ The Sony i.LINK optical disc drive is compatible only with certain Sony VAIO® PCG series computers preinstalled with Microsoft® Windows® XP Home Edition or Professional.

Notes on using i.LINK optical disc drives

- You can use the supplied Application Recovery and System Recovery CDs with an i.LINK optical disc drive. See "Application and System Recovery CDs" for more information.
- Do not use an optional i.LINK optical disc drive and an optional optical disc drive with PC Card at the same time. Connecting both drives may cause a system malfunction.

Connecting a PC Card Bus Drive

You can use an optional optical drive, such as a Sony DVD-ROM or CD-ROM drive (PCGA-51/A), with your computer. If you use an optional drive when your computer is running on battery power, the battery life will be shorter. The drive draws power from the computer through a PC Card.

> ⚠ **If you connect a non-Sony DVD drive to your VAIO® computer, the DVD playback may not function properly. The bundled DVD software must be installed to play a DVD.**
>
> **For best performance, it is recommended that you use a Sony compatible DVD drive.**

To connect an optical drive

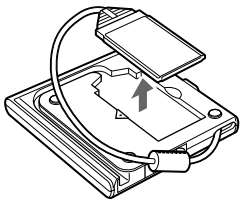
Procedures for connecting an optical drive may vary, depending on the specific drive you purchase. See the manual supplied with your optical drive for more information on its installation and use.

✍ You can connect an optical drive while the computer is on. For specific instructions on using your supplied Application, Driver, and System Recovery CDs, see "Using the Recovery CDs" for more information.

1 Remove the PC Card slot protector from the PC Card slot. See "To remove a PC Card" for more information.

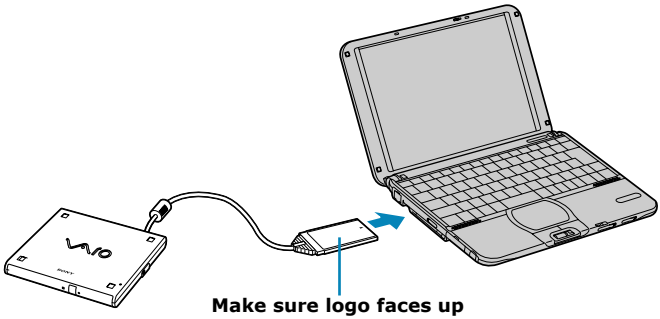
2 Remove the PC Card from the bottom side of the optical drive.

Removing PC Card



3 Insert the PC Card into the PC Card slot with the SONY logo facing up. See "Using PC Cards" for details.

Inserting PC Card

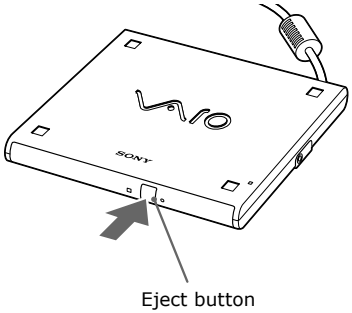


A protective cover is attached to the lens of the optical drive at the factory. Before using the optical drive, remove the protective cover.

To insert a disc

1 Press the Eject button. The disc tray slides out.

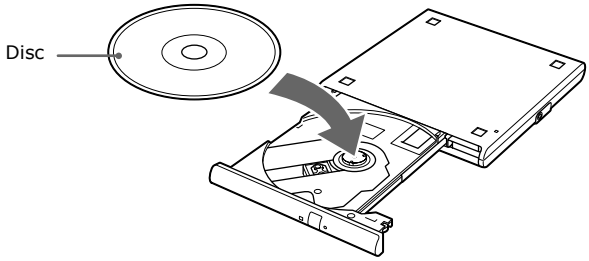
Optical Drive



2 Place the disc in the tray with the label side facing up.

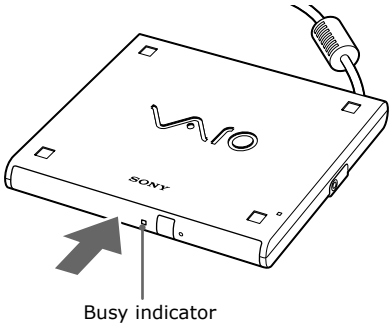
3 Push the disc onto the hub until the disc clicks into place.

Inserting Disc



4 Close the tray by pushing it in gently. The Busy indicator on the drive flashes while your computer is reading data from the disc.

Flashing Busy Indicator



To remove the drive

Remove the PC Card from the computer. See “To remove the floppy disk drive when the computer is on” for more information.

Notes on CD and DVD discs

Handling CD or DVD discs

- Do not touch the surface of the disc.
- Do not drop or bend the disc.
- Avoid using adhesive labels to identify your discs. Adhesive labels may come off while the disc is in use in your optical drive, and may cause damage to the unit.

Cleaning CD or DVD discs

- Fingerprints and dust on the surface of a disc may cause data reading errors. Proper care of the disc is essential to maintain its reliability. Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray, as they may cause damage to the disc.
- For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center outward.
- If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry soft cloth.

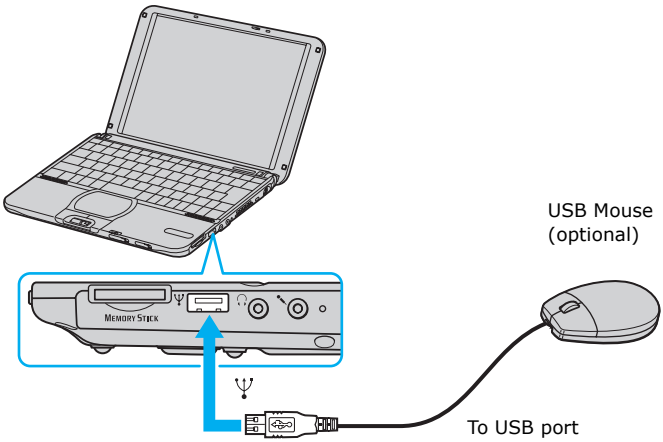
Connecting a USB Mouse

You can connect an optional USB mouse, such as the Sony PCGA-UMS1 series, to your computer.

To connect a USB mouse

Plug the mouse cable into the USB port. PCGA-UMS1 series drivers have already been installed.

Connecting a USB Mouse



✍ A serial mouse or PS/2® mouse is not compatible with this VAIO® computer.

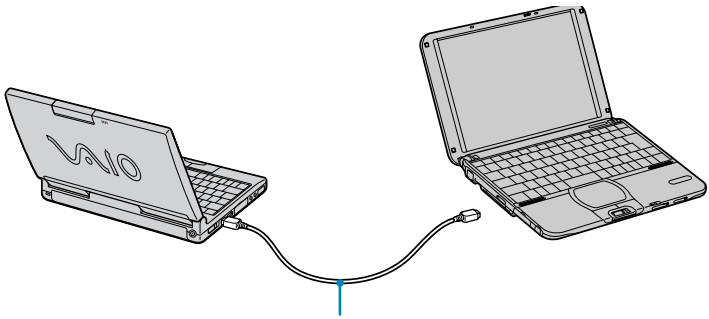
See the manual supplied with your mouse for more information on its installation and use.

Connecting VAIO Computers

Connecting with i.LINK

You can use an optional i.LINK®* cable to connect your VAIO® computer to another VAIO computer that has the preinstalled Microsoft® Windows® operating system. You may use an i.LINK cable (not supplied) to connect the two systems and then use one computer to edit, copy, or delete files on the other computer. You can also print from a printer that is attached to either computer.

Connecting with an i.LINK cable



i.LINK cable (optional)

✍ When you connect two VAIO computers, you must assign each computer a unique name. The computers can be identified by this unique name when the two computers are networked together.

To connect VAIO computers that do not have the latest Windows® operating system, Smart Connect software may be necessary. Consult the Sony Computing Support Web site for support options (http://www.sony.com/pcsupport).

* i.LINK is a trademark of Sony used only to designate that a product contains an IEEE1394 connection. The i.LINK connection may vary, depending on the software applications, operating system and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Connecting an i.LINK AV Device

Your VAIO® computer includes an i.LINK®* S400 (IEEE1394) port, which you can use to connect a compatible i.LINK audiovisual (AV) device, such as an i.LINK enabled digital video camera recorder. See the manual supplied with your digital video camera recorder for more information on its installation and use.

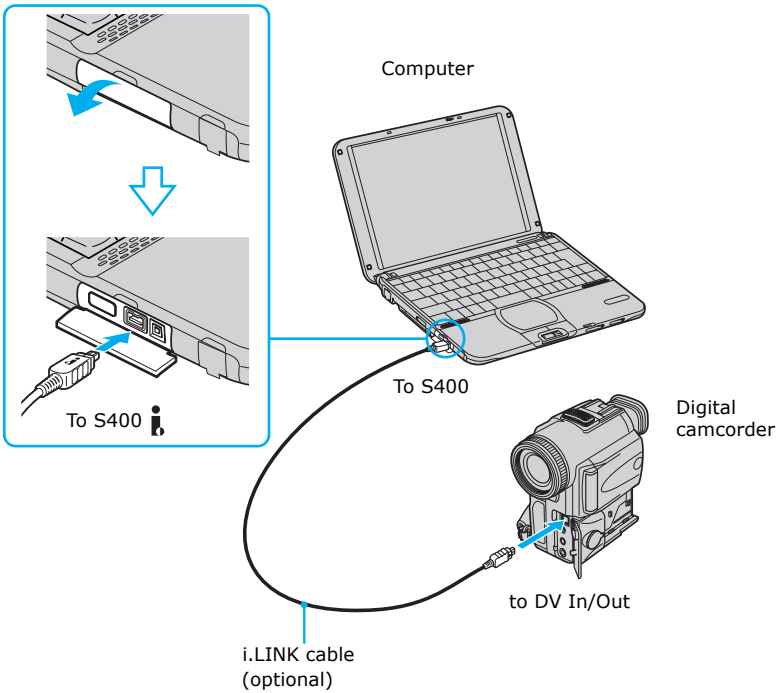
✍ You can purchase compatible i.LINK cables from your local retailer, through the Sony VAIO® Direct Web site (http://vaio.sonystyle.com), or by calling 1-888-315-7669 (toll free).

To connect a digital camcorder

❑ Plug one end of an i.LINK® cable into the S400 port on the left side of the computer and the other end into the DV In/Out port on the digital camcorder.

* i.LINK is a trademark of Sony used only to designate that a product contains an IEEE1394 connection. The i.LINK connection may vary, depending on the software applications, operating system and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Connecting a Digital Camcorder



Notes on connecting an i.LINK device

- A connection to a Sony digital camcorder is pictured above; your digital camcorder may need to be connected differently.
- See the manual supplied with your digital camcorder for more information on its installation and use.
- Only Sony digital video camera ports labeled “DV In/Out” or “i.LINK” are compatible i.LINK devices.
- Do not connect more than one digital video camera at a time. The software supplied with your computer will not recognize multiple cameras.
- The i.LINK port does not supply power to external devices. If the external device requires power from the i.LINK port, you cannot use the device with the computer.

- The computer supports transfer rates up to 400 Mbps; however, the actual transfer rate is limited to the maximum transfer rate supported by the external device. If multiple devices are connected, the transfer rate will be the lowest maximum transfer rate for the connected devices.
- The i.LINK® features available may vary depending on the software applications you use. See the documentation supplied with your software for more information.
- The i.LINK cables compatible with your VAIO® computer include cables with the following part numbers: VMC-IL4415 (a 1.5-meter cable with a 4-pin connector at each end), VMC-IL4615 (a 1.5 meter-cable with a 4-pin connector at one end and a 6-pin connector at the other), and VMC-IL4435A (a 3.5-meter cable with a 4-pin connector at each end). You can purchase these cables from your local retailer, through the Sony VAIO® Direct Web site (http://www.sonydirect.com), or by calling 1-888-315-7669 (toll free).

Connecting an External Display

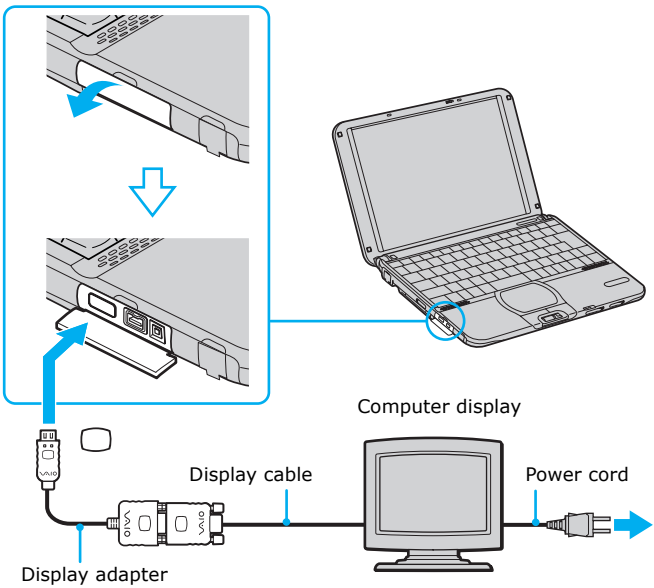
You can connect an external display to your VAIO® computer. For example, you can use the computer with any of the following:

- ❑ Computer display or monitor (See "To connect a computer display" for more information)
- ❑ Projector (See "To connect a projector" for more information)

To connect a computer display

1. First make sure the display adapter is connected to the computer.
2. Connect the computer display's VGA adapter to the supplied display adapter's Monitor port.

Connecting a Display



✍ See the manual supplied with your computer display for more information on its installation and use.

To connect a projector

You can use a projector as an external display, such as the Sony LCD Projector.

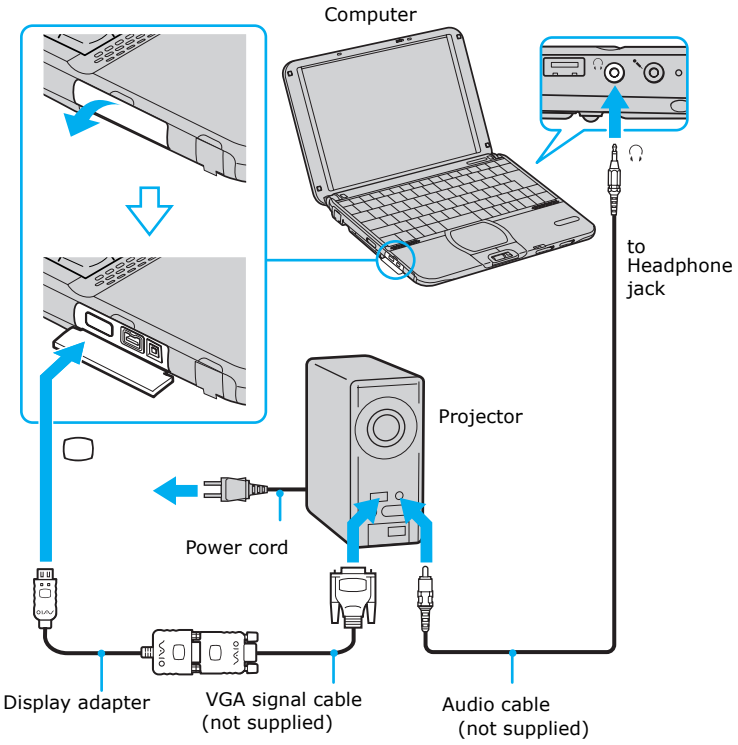
You can connect a projector using the supplied Display adapter.

1 First make sure the port replicator is connected to the computer.

2 Plug one end of the VGA signal cable (not supplied) into the port replicator's Monitor port, and the other end into the projector's corresponding port.

3 Plug the audio cable into the Headphone ∩ jack.

Connecting a Projector



✍ See the manual supplied with your projector for more information on its installation and use.

You may not be able to display the computer's LCD and the external display together, depending on the specific computer display or projector used.

Connect the AC adapter after you finish connecting all other peripheral devices. Turn on all the peripheral devices before you turn on the computer.

Connecting a USB Printer

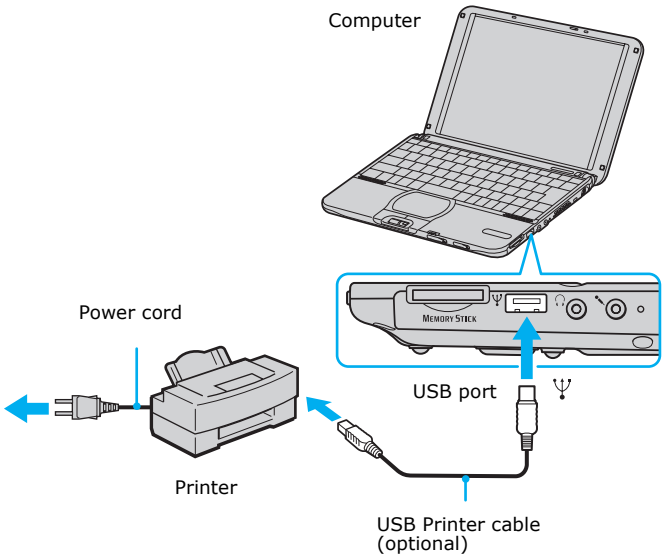
You can connect a Windows® compatible USB printer to your computer to print documents.

✍ To use a printer, first install the driver software supplied with your printer.

To connect a printer

Plug the optional USB printer cable into the USB port on your computer and the USB port on your printer. You can also connect the USB printer cable into the USB port on the supplied port replicator.

Connecting a Printer



✍ See the manual supplied with your printer for more information on its installation and use.

Connecting an External Microphone

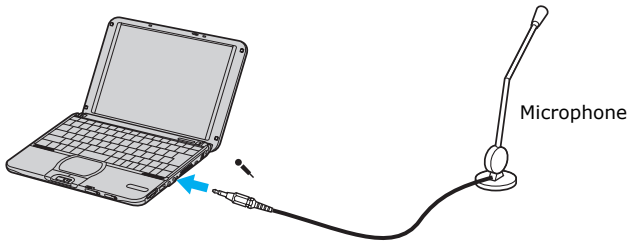
You can enhance the quality of sound input by using an external microphone.

✍ Make sure your microphone is designed for computer use.

To connect an external microphone

Use the symbol to locate the red-colored Microphone jack. Plug the microphone cable into this jack.

Connecting a Microphone



✍ See the manual supplied with your microphone for more information on its installation and use.

To record from a microphone or audio equipment

You can record messages, memos, or other recordings in analog by connecting a microphone or other audio equipment to the Microphone jack of your computer and then switching the jack functionality. The Microphone jack is for MIC IN (monaural).

To switch the microphone jack functionality

To switch the Microphone jack functionality for use with a microphone or an audio device:

1. Double-click on the task tray located in the lower right corner of the Desktop window. The Volume Control window appears.
2. From the Options menu, click Properties. The Properties window appears.

3 In the Adjust Volume panel, select Recording, and then click OK. The Recording Control window appears.

4 Select either Microphone or Stereo Out.

✍ When you are recording using a microphone, select Microphone. If you are recording using other audio equipment, select Stereo Out.

To adjust sound volume in the Recording Control window

When Microphone or Stereo Out are not displayed in the Recording Control window, do the following:

1 Select Options and click Properties.

2 Click the item you want to display in Control.

3 Click OK.

✍ You can only adjust the recording volume in the Recording Control window in step 3. If you adjust the volume in step 1, the adjustment is only effective for playing sound. It does not adjust the volume for recording sound.

To increase the sound of the microphone

1 Double-click on the task tray located in the lower right corner of the Desktop window. If Microphone is not displayed, from the Options menu click Properties, select Microphone from the Control panel, and then click OK.

2 From the Options menu, select Advanced Controls. The Advanced buttons, where applicable, will display in the Volume Control window.

3 From the Microphone panel, click Advanced. The Advanced Controls for Microphones dialog box displays.

4 Click Mic 20dB in the Other Controls window section, and then click Close.

To adjust sound device volume

You can adjust the sound device volume for playing or recording.

To adjust the volume when playing, double-click in the task tray located in the bottom right corner of the Desktop window. The Volume Control window is displayed.

To adjust the sound of other devices, do the following:

1 Select Options and click Properties.

2 In the Volume Adjust window, select Playback.

3 Click the check box of the item you want to display in Control.

4 Click OK.

Sound device	***Function***
Volume Control	Adjust the sound level from the speakers or headphones.
WAVE	Adjust the wavfile sound or the system sound of Windows.
PC Beep	Adjust the beep sound when inserting or removing the PC Card and other devices.
Telephone	Adjust the modem or telephone line volume.
Microphone	Adjust the internal or external microphone volume.
Line	Adjust the audio equipment volume.
CD Audio	Adjust the volume of the CD in the optional optical drive.
3D Wide	Widen the sound effect. (This is effective for games and similar applications.)

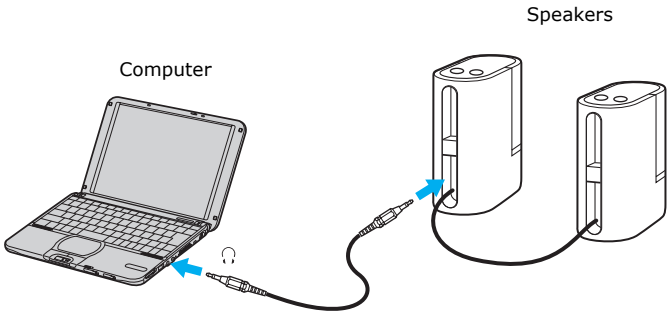
Connecting External Speakers

You can enhance the sound quality of your computer by connecting external speakers.

To connect external speakers

- ❑ Use the ∩ symbol to locate the Headphone jack. Plug the speaker cable into this jack.

Connecting external speakers



Notes on using external speakers

- ❑ Make sure that the speakers you purchased are designed for computer use.
- ❑ Before you turn on the speakers, turn down the volume.
- ❑ Do not place floppy disks or other data disks on or near the speakers; the speakers' magnetic field may damage the data on the disks.

See the manual supplied with your speakers for more information on their installation and use.

Expanding Your Computer's Capabilities

The following peripheral devices can be connected to your computer, to expand the capabilities of your computer and enhance its versatility to meet your various business or personal needs:

- A Personal Digital Assistant (PDA)
- The Wireless LAN Access Point

✍ For information on available Sony products, go to: http://www.sonystyle.com/vaio.

Personal Digital Assistant

A handheld PDA is the quintessential personal planner and entertainment center that fits in your pocket. With a PDA, you can easily perform the following functions:

- Enter your schedule details in the calendar and view them by the day, week, or month, and even set an alarm to remind you of important events.
- Keep your contact names, addresses, phone numbers, and other details in the address book, and find them when you need them.
- Add tasks to the To Do List, prioritize them, and assign them due dates.
- Synchronize your data with the software on your computer, to back up your data.
- Track expenses when you are out of the office, then transfer the data to your computer.
- Exchange data with your computer.

The Wireless LAN Access Point

The Wireless LAN Access Point, which is also called the Access Point, is designed for building a wireless LAN (Local Area Network) environment. You can easily build a wireless LAN environment by plugging the Access Point into an AC power outlet, and using the provided software. Because a wireless LAN configuration requires no wiring, you can operate multiple computers more freely than ever before.

You can also connect your Access Point to a telephone line, Integrated Services Digital Network (ISDN) router, cable modem, or Digital Subscriber Line (xDSL) modem to share access to the Internet among multiple computers.

✍ For information on available Sony products, go to:
http://www.sonystyle.com/wirelesslan.

Customizing Your VAIO Computer

You can customize the settings of your computer. The following sections briefly describe how to change your computer's default settings. You can also refer to Sony Notebook Setup Help for more detailed information.

- ❑ Displaying the Sony Notebook Setup Screen
- ❑ Controlling Power Management
- ❑ Displaying Battery Information
- ❑ Selecting the Display Mode
- ❑ Using the Multilingual User Interface Language Option

Displaying the Sony Notebook Setup Screen

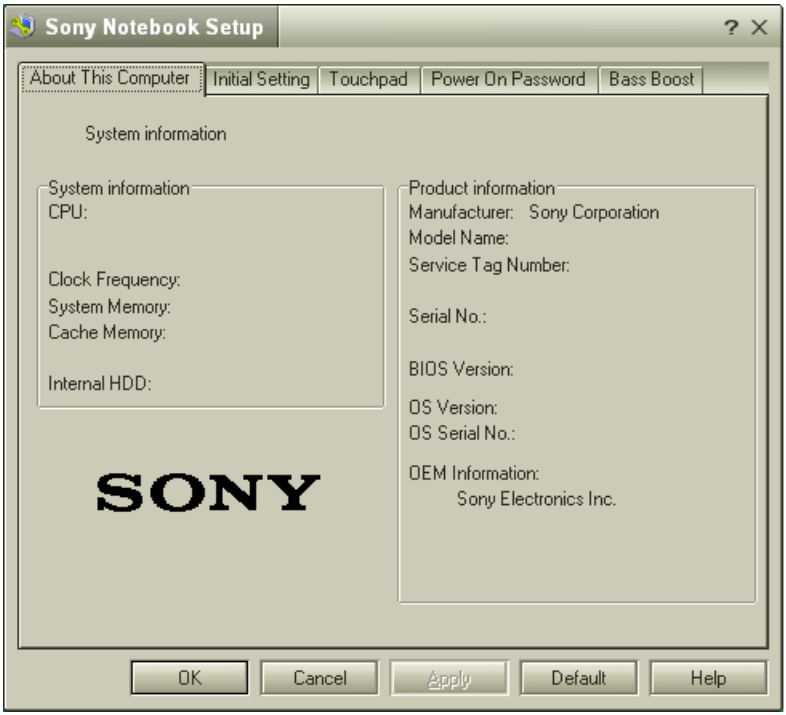
✍ See the manual supplied with your computer display for more information on its installation and use.

To display the Sony Notebook Setup screen:

1 Click Start on the Windows® taskbar.

2 Point to All Programs and click Sony Notebook Setup.

Sony Notebook Setup Screen



3 Select the tab for the item you want to change. See “Sony Notebook Setup tabs” for more information.

4 After you finish making your changes, click OK.

Sony Notebook Setup tabs

Tab	Description
About This Computer	Display system information, including memory capacity, serial number, and BIOS version.
Initial Setting	Change the volume of the sounds that play while the operating system is loading. Select the order of drives and devices from which you want to load the operating system. You can specify the hard drive as well as other drives inserted into your computer.
Touchpad	Change touchpad settings, or enable/disable touchpad functionality if you are using an external mouse.
Power On Password	Set the password to secure your computer.
Bass Boost	Set the Bass Boost option.

✍ For more information about each option, click Help on the Sony Notebook Setup screen to display the Help file.

Controlling Power Management

The PowerPanel™ utility enables you to control the power management of your computer, and provides key information about system activity and battery life. The following sections briefly describe how to conserve your computer's battery power. You can also refer to PowerPanel Help for more detailed information.

To view the Power Management status icons

The Power Management status icons are displayed on the taskbar. Move the pointer over the icons to see the tool tip that displays information about the active profile.

The current profile icon's appearance changes depending on which power management profile is currently selected. To change the power management profile, right-click the current profile icon, and then select a profile from the pop-up list. See "Power Management profiles" for a description of available options.To select another power management command, click that icon in the Power Management toolbar.

✍ When you use the battery pack to power your computer, your system selects the Maximum Battery Life power management profile by default. If you select a different power management profile while using battery power, that profile is selected automatically the next time you use the battery pack to power your computer.

Refer to PowerPanel Help for information on customizing the Power Management settings.

You can change the power management settings, such as the system timer and the brightness of the screen.

To access PowerPanel Help

1. Click Start, point to All Programs, and select PowerPanel.
2. Click Help. The PowerPanel Help window appears.

To customize Power Management settings

1. Right-click the current Profile icon on the taskbar.
2. Select Edit/Create Profiles from the menu. The Profile Editor window appears.

3 Click a profile whose setting you want to change from the list in the left field.

4 Double-click an item whose setting you want to change from the list in the right field.

5 Click the desired setting.

6 Click the File menu, and then click Save.

7 Click the File menu, and then click Exit.

Power Management profiles

The PowerPanel™ utility provides several predefined power management profiles. Each profile consists of a group of power management settings that are designed to meet specific power management goals — ranging from maximum power management to no power management. You can change the settings for any of the predefined profiles (except for the Disable Power Management profile), or you can create your own profile to suit your portable computing needs. The predefined profiles are:

Icon	Description
	Maximum Performance Provides the best system performance while still conserving power.
	Maximum Battery Life Provides power saving features to give you maximum battery life and good performance. It slows the computer and puts it into Standby mode after a specified time period.
	Ultimate Battery Life Extends the Maximum Battery Life by disabling ports such as the i.LINK port. This profile disables many applications such as Memory Stick, DVgate, and Smart Capture.

Icon	Description
	Disable Power Management Turns off all power management features such as Standby and Hibernate modes. You can not change the settings of this profile.
	AC Power The power management state when AC power is in use. Similar to the Power Management Off setting. Power Management automatically loads the AC profile unless you disable this feature.
	Games Disables the display and the Hard Disk Standby timer.
	Presentation Keeps the display on at all times while it conserves power. This option is ideal for slide show presentations. You can establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby to optimize power management for your system.
	Camera Optimizes performance and power requirements for camera usage.
	Word Processing Optimizes power management with longer timeouts on the hard disk and display screen. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby to optimize power management for your system.

Icon	Description
	Spreadsheet Optimizes performance and power requirements for spreadsheet applications.
	Communications Extends battery life by initiating a quick display timeout. The Internal modem remains powered. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby to optimize power management for your system.
	Automatic Profile Selection Automatically switches to a profile suitable for active applications.

✍ Do not choose the Automatic Profile Selection when connected to AC power.

Power Management commands

PowerPanel™ also provides power management commands that you can use to activate specific power management functions and to control power for a specific device. You can use these commands to override a profile setting or initiate an immediate action.

Icon	Description
	Standby Puts the system into Standby mode, a power management state that saves the state of the system and peripheral devices in memory (RAM). Power consumption reduces to a minimum, and the system remains on. To return the system to the active state, press any key or the power button on your computer.
	Hibernate Provides for the lowest level of power consumption. The system writes the state of the system and peripheral devices to the hard disk drive and turns off the system power. To return the system to the original state, use the power button to turn on power. The system saves the data in the Save to Disk Partition on the hard disk drive.
	LCD (Video) Standby Turns off the video display to save power. If you turn off the Video Standby timer, the display remains active except when the system enters Standby mode. The video display system is one of the largest consumers of power in the system.

Conserving battery power

When using the computer with a battery, the LCD display and the hard disk drive can be set to switch off automatically to conserve battery power.

See “Power Management profiles” for more information.

Displaying Battery Information

You can display information for the battery on your computer. The following sections briefly describe how to display your computer's general battery information. You can also refer to PowerPanel Help for more detailed information.

To display the Battery Information window

1. Double-click the current Profile icon on the taskbar. The Battery Information window appears.
2. For additional information, click the Help button. The PowerPanel Help window appears.

To display the Battery Information toolbar

1. Right-click the taskbar, point to Toolbars, and select Battery Information.
2. The Battery Information toolbar appears on the taskbar.

The toolbar displays battery status gauges and the battery status icon.

Battery Information Toolbar

- **Percentage indicator —** Displays the percentage of the remaining capacity.
- **Time indicator —** Displays estimated time (hours:minutes) remaining before the battery fully drains, also referred to as the time-to-empty.

To close the Battery Information toolbar

1. Right-click the Battery Information toolbar, and point to Toolbars.
2. Click to deselect Battery Information. The toolbar disappears from view.

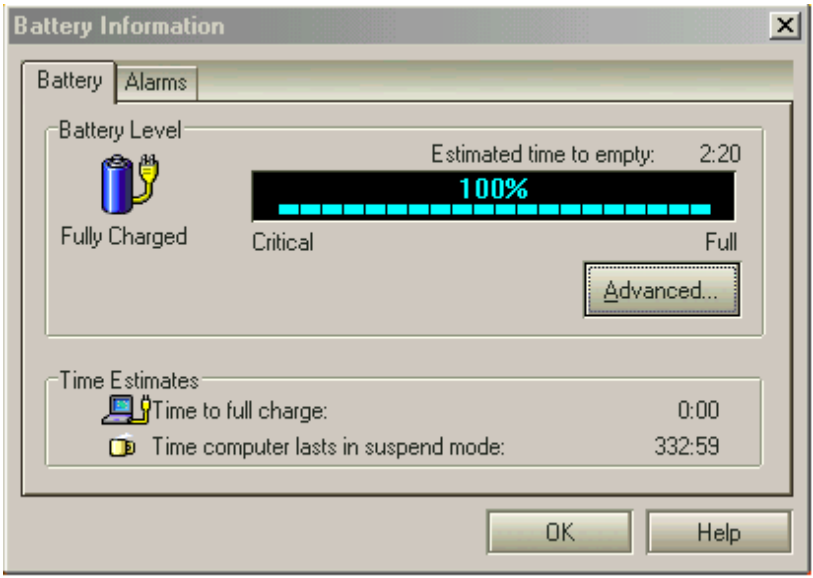
Battery icon descriptions

Battery icon	Battery status
	Charging
	Fully charged
	Discharging
	No battery

Displaying detailed battery information

Double-click the battery icon on the task tray to display the Battery Information window. The screen appears displaying the Battery tab, which contains information such as the estimated time-to-empty and charging time.

Battery Information Window



Customizing the Battery Information toolbar and alarm system

You can customize the Battery Information toolbar to suit your portable computing needs, including modifications to the alarm settings. Refer to PowerPanel Help for more information.

Changing the window design of Sony software

To change the window design

1. Click the Start button, then select Control Panel.
2. In the left window pane of Control Panel, click “Switch to Classic View.”
3. Double-click UI Design Selector.
4. Click << or >> and select the desired design.

5 Click Apply. The “UI Design Selector” window design changes. The window design for your Sony software will match the “UI Design Selector” window.

6 To try another selection, click << or >> and then click OK to close the UI Design Selector.

✍ This feature is available with UI Design Selector-compatible software only.

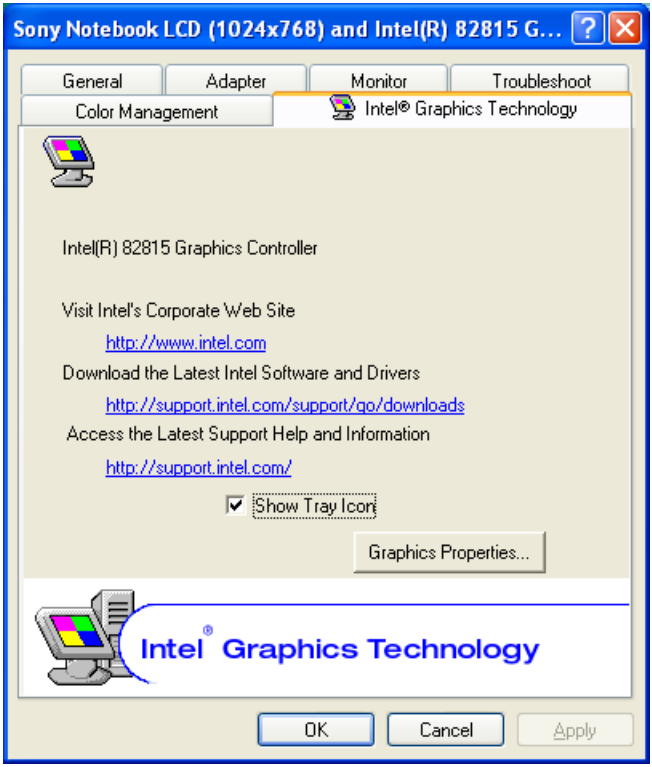
Selecting the Display Mode

This notebook uses the Intel® video controller, which enables you to select the desired display when the notebook is connected to an external monitor. When you connect an external display, you can switch the display mode between your notebook's LCD display and the external monitor.

To select the display mode

1. Click Start, then point to Control Panel.
2. Click Display to access the Display Properties window.
3. Click the Settings tab, click the Advanced button, and select the Intel® Graphics Technology tab to display the Intel® 82815 Graphics Controller Properties dialog box.

Intel® 82815 Graphics Controller Properties Screen



4 Click the Intel® Graphics Technology tab, then click the Graphics Properties button.

5 Click the Device tab.

6 Select the type of display.

✍ You may not be able to display the notebook LCD screen and an external display or projector at the same time, depending on the types of computer displays and projectors you are using.

Turn on the notebook after you turn on the peripheral devices.

Using the Multilingual User Interface Language Option

(Windows® XP Pro only) After you have initially setup your new VAIO computer, you have the ability to change the language displayed in Microsoft® Windows® XP Professional operating system. The multilingual user interface (MUI) language option changes the text controlled by Windows XP Professional operating system. Menus, help files, and icons generated by Windows XP Professional are shown in your selected language. All other software applications are displayed in English as the default language.

✍ The multilingual user interface language option is not designed to replace a localized version of the Microsoft Windows XP Professional operating system. Under certain conditions, some third-party software applications may not function properly.

To Change the Language Option

1. Click Start in the Windows taskbar, then click Control Panel.
2. Click "Date, Time, Language and Regional Options", then click Regional and Language Options. The Regional and Language Options dialog box appears.
3. Select the Languages tab.
4. From the "Language used in menus and dialogs" drop-down menu, select the desired language:
   - ❑ English
   - ❑ francais
   - ❑ Português
   - ❑ español
5. Click Apply, then click OK.
6. The Change Regional dialog box appears. Click OK.
7. Click Start in the Windows taskbar, then click Logoff. Restart your computer for the settings to take effect.

✍ Additional users can also change to their desired language(s) without effecting your existing language settings.

To Change Numbers, Currency, Time, and Date Formats

You can change the system's number, currency, time and date formats to coordinate with your chosen country or language settings. To change these formats, follow the steps below:

1. Click Start in the Windows taskbar, then click Control Panel.
2. Click "Date, Time, Language and Regional Options", then click Regional and Language Options. The Regional and Language Options dialog box appears.
3. From the Regional Options tab, click the "Standards and formats" drop-down menu to view the available country choices. Select the desired country.
4. Click Customize to change the number, currency, time, and date settings. Click Apply, then click OK.

Adding Memory

In the future you may want to install memory modules to expand the functionality of your computer. See the Specifications flyer supplied with your computer for the amount of memory preinstalled on your computer. Expansion memory modules are available as options. For memory upgrades, use only unbuffered PC100 (CL2) SDRAM µDIMM modules. (Sony offers the optional 128 MB PCGA-MM128T memory module.)

This section provides you with information on removing and replacing a memory module:

- ❑ Precautions and Procedures
- ❑ Removing a Memory Module
- ❑ Installing a Memory Module
- ❑ Confirming Added Memory Capacity

Precautions and Procedures

The procedures described below assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment.

> ⚠ **Sony recommends that memory upgrades be performed by an authorized Sony Service Center. To find the nearest center or agent, go to: http://www.sony.com/pcsupport.**
>
> **Be careful when installing a memory module in your computer, and be sure to observe the proper safety precautions listed below. Mistakes that occur when installing or removing a memory module may cause a malfunction.**

- Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described below. Failure to do so may result in personal injury or equipment damage.
- Electrostatic discharge (ESD) can damage disk drives and other components. Perform the procedures described below only at an ESD workstation. If such a station is not available, do not work in a carpeted area, and do not handle materials that produce or hold static electricity (cellophane wrappers, for example). Ground yourself by maintaining contact with an unpainted metal portion of the chassis while performing the procedure.
- Do not open the memory module package until you are ready to install the module. The package protects the module from ESD.
- Use the special protective package to store a memory module and prevent ESD, or wrap the memory module in aluminum foil.

Typical expansion memory configuration

Total System Memory (MB)	On board (MB)	Slot (MB)
128	128	0
256	128	128

Installing a Memory Module

To add a memory module, proceed as follows:

1 Turn off the computer and all peripheral devices.

2 Disconnect the power cord and all cables from the computer, and remove the battery.

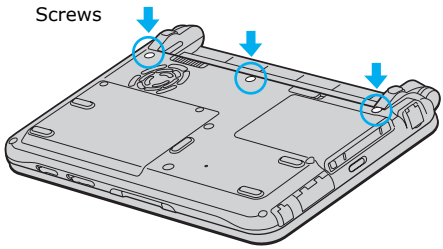
3 Wait for the computer to cool down.

✍ The interior of the computer becomes extremely hot during operation. Wait at least one hour for the computer to cool down before you remove the screws.

4 Use an appropriate screwdriver to loosen and remove the three screws at the bottom of the computer.

⚠ **To avoid damaging the computer, do not remove or loosen any other screws.**

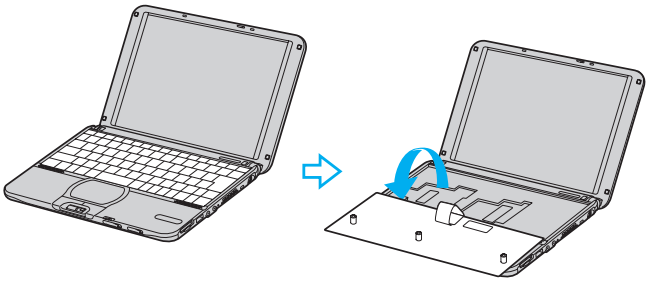
Removing Bottom Screws



5 Slide the LCD lock lever and lift the cover.

6 Slide the keyboard toward the LCD display, then lift it away slightly.

Lifting the Keyboard



7 Lift the keyboard from the LCD display side.

8 Gently turn the keyboard over the touchpad. Take care not to detach the cable when lifting the keyboard.

9 Touch a metal object (such as the connector panel on the back of your computer) to discharge static electricity.

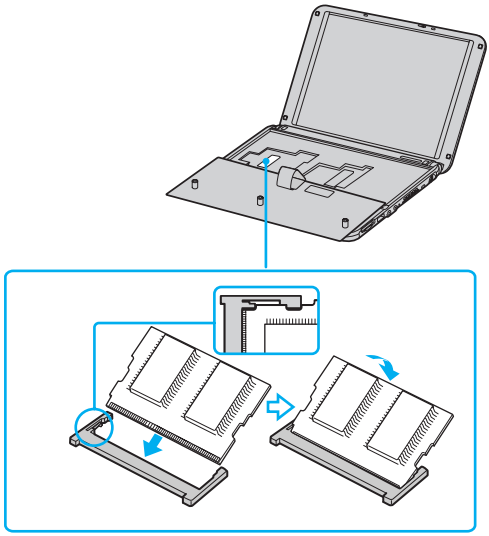
10 Remove the existing memory module.

11 Remove the new memory module from its packaging.

12 Install the memory module by sliding the module into the open slot.

> ⚠ **Do not touch any part of the motherboard or the other components inside the computer.**

Installing New Memory Module



13 Snap the connectors into place when the board is correctly seated.

14 Close the computer cover and replace the three (3) fastening screws on the bottom of the computer.

Removing a Memory Module

1 Turn off the computer and all peripheral devices.

2 Disconnect the power cord and all cables from the computer, and remove the battery.

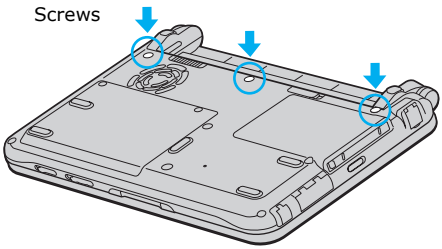
3 Wait for the computer to cool down.

✍ The interior of the computer becomes extremely hot during operation. Wait at least one hour for the computer to cool down before you remove the screws.

4 Use an appropriate screwdriver to loosen and remove the three screws at the bottom of the computer.

⚠ **To avoid damaging the computer, do not remove or loosen any other screws.**

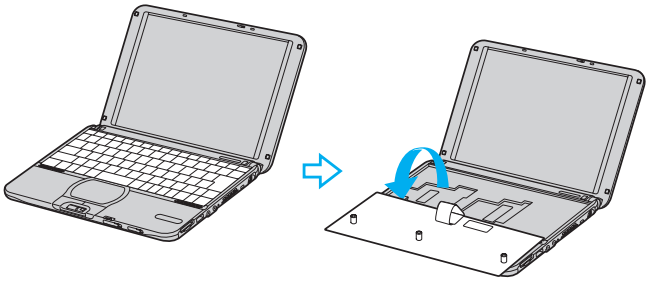
Removing Bottom Screws



5 Slide the LCD lock lever and lift the cover.

6 Slide the keyboard toward the LCD display, then lift it away slightly.

Lifting the Keyboard



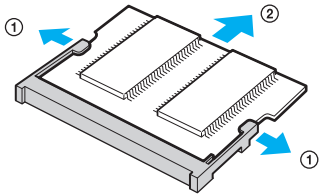
7 Lift the keyboard from the LCD display side.

8 Gently turn the keyboard over the touchpad. Take care not to detach the cable when lifting the keyboard.

9 Touch a metal object (such as the connector panel on the back of your computer) to discharge static electricity.

10 Remove the memory module by pulling out the tabs (see arrows No. 1), and pulling out the module in the direction of arrow No. 2.

Removing a Memory Module



11 Gently replace the keyboard, then press it into your computer.

12 Close the computer cover and replace the three (3) fastening screws on the bottom of the computer.

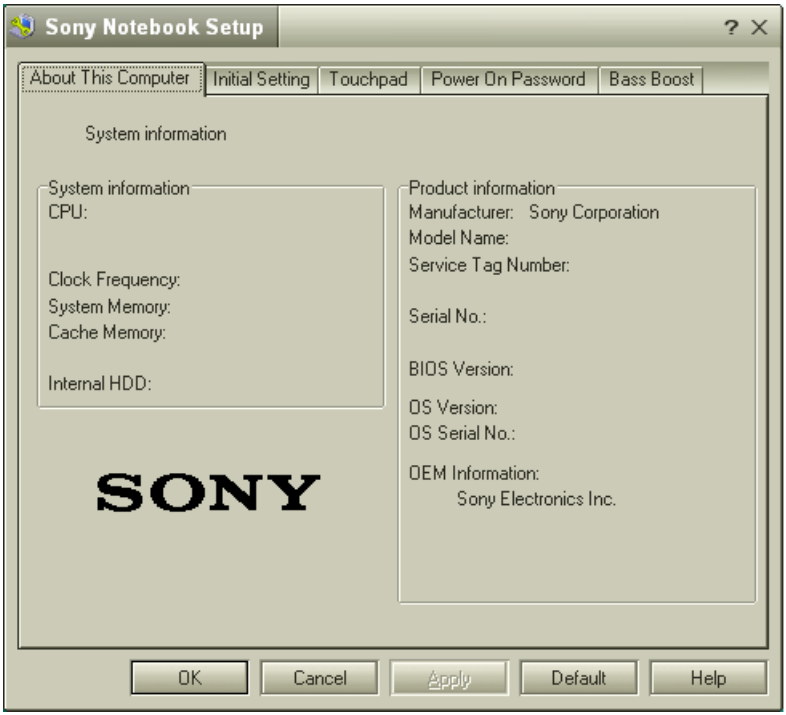
Confirming Added Memory Capacity

1 Turn on the computer.

2 Click Start on the Windows® taskbar, point to All Programs, and then click Sony Notebook Setup.

3 Click the About This Notebook tab. Verify that the System Memory displayed in the left panel matches the amount of memory installed.

Sony Notebook Setup Dialog Box



About the Software on Your Computer

Your VAIO® computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you the following:

- Software Overview
- Software Support Information
- Sony Service Center

Software Overview

Your computer may not be supplied with all of the software listed below, depending on the configuration you purchased. Preinstalled software may not be identical to retail versions, or include supporting documentation.

Adobe Acrobat® Reader™
Adobe Systems Inc.
Acrobat Reader software enables you to view, navigate, and print electronic documents in Adobe Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe® Photoshop® Elements Trial Version
Adobe Systems Inc.
Using state-of-the-art image editing tools, you can unleash your artistic ability and create digital images for print, e-mail, and posting to the Web. The versatile image capturing options enable you to start working with digital and traditional photos immediately. Explore extensive creative possibilities for your personal images with Adobe Photoshop Elements software. This trial version allows you to evaluate the software for 30 days, after which you can purchase the full program for a special price.

America Online®
America Online, Inc.
America Online is a popular Internet online service. Stay in touch with family and friends with easy-to-use e-mail. Manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

Apple QuickTime™
Apple Computer Inc.
QuickTime is the Apple technology that makes video, sound, music, 3D, and virtual reality come alive for our Internet browser and Windows.

AT&T WorldNet® Service

AT&T Corp.

AT&T WorldNet Service offers fast, reliable Internet access. Customer benefits include Web-based e-mail, video e-mail, multiple e-mail accounts, free Web pages, online and live agent technical support, instant messaging, and parental controls.

DigitalPrint

Sony Electronics Inc.

This image management software makes it fun and easy to edit, import, and organize your digital pictures in a photo album for rich digital printing to any standard color laser or inkjet printer. DigitalPrint can also be used to make custom CD labels for your audio CDs.

DVgate™ (On selected models)

Sony Electronics Inc.

Connect a digital video camera recorder to the i.LINK®* connector and capture your own video clips and still images. You can edit the clips from your video, add others, and combine clips into new movie segments. You can also save your images in a variety of popular file formats.

EarthLink™ Network Total Access

EarthLink Network Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB Web site, a member magazine, and 24-hour technical support.

* i.LINK is a trademark of Sony used only to designate that a product contains an IEEE1394 connection. The i.LINK connection may vary, depending on the software applications, operating system and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Microsoft® Word (On selected models)
Microsoft Corp.
Microsoft Word makes it easy to create shared Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word also extends that ease-of-use to international users, making it simple to create multilingual documents.

MovieShaker™
Sony Electronics Inc.
Sony's original MovieShaker software creates personal movies that have transitions, background music and text. Just import your video clips and "shake" with a click of the mouse. Your personal movies are easy to create and fun to share with family and friends.

PC-Cillin® 2000
Trend Micro, Inc.
PC-Cillin provides portable, easy-to-use, real-time antivirus security at your computer's entry point (beaming, synchronization, Internet access) to defend against potential threats hidden inside files, e-mail, or on the Web.

PicoPlayer™
Sony Electronics Inc.
PicoPlayer software is a video player utility that enables you to use Giga Pocket™ Personal Video Recorder functions on a computer that does not have Giga Pocket Personal Video Recorder installed. You can play Video Capsules created by Giga Pocket Personal Video Recorder, and, if a Giga Pocket server is available on your home network, watch TV streamed from the Giga Pocket server and remotely control the Giga Pocket server's TV programming functions.

Quicken®
Intuit, Inc.
Quicken is a fast, easy way to organize your finances. Quicken works just like your checkbook, so it is easy to learn and use. Quicken manages all your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

RealPlayer®
RealNetworks Inc.
RealPlayer is the RealNetworks video and audio player which lets you access 2,500 radio stations featuring music, news, and sports.

Smart Capture
Sony Electronics Inc.
Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK® connection between your computer and a Sony Digital Handycam® Camcorder that supports the i.LINK interface. It allows you to capture compressed video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video and network convergence.

SonicStage
Sony Electronics Inc.
This new jukebox application adds a host of new features to its predecessor, OpenMG™ Jukebox. Continuing to take advantage of Sony's copyright-protected ATRAC3™ format for high-quality digital audio storage, SonicStage sports a new Music Visualizer, a sleek new player skin design, audio CD burning capability, and a parametric equalizer for fine-tuning audio playback.

Sony ScreenBlast™ ACID
Sony Pictures Digital Entertainment
With the powerful Sony ScreenBlast ACID software you can create royalty-free music by utilizing its loop-based production tool, including unlimited tracks and enhanced effects.

Sony ScreenBlast™ Sound Forge®
Sony Pictures Digital Entertainment
Sony ScreenBlast™ Sound Forge® enables you to record, edit, and process mono or stereo audio files for your multimedia or Internet projects. Whether you want to use a number of professional effects, convert video into streaming media, or synchronize audio to video—this software has everything you need to create rich, immersive multimedia and Internet content.

Sony on Yahoo!
Yahoo! Inc.
Personalize your own web portal with Sony on Yahoo! Get a free webmail account, customized news and local weather reports, comics, and more.

VAIO Support Agent
Sony Electronics Inc.
VAIO Support Agent provides immediate, interactive online support.

WinDVD®
InterVideo Inc.
WinDVD is a simple-to-use DVD player including all the features you would expect to find in a standard consumer DVD player, while also offering advanced display and navigation features such as zoom, pan, bookmark, and time search.

Software Support Information

Adobe Acrobat® Reader™, Photoshop® Elements (Adobe Systems, Inc.)

Web site	http://www.adobe.com/
phone	206-675-6126 (fee-based support)
e-mail	techdocs@adobe.com
hours	M-F, 6 AM-5 PM PST

America Online® (America Online, Inc.)

Web site	http://www.aol.com
phone	800-827-3338
hours	7 days a week, 24 hours a day

Apple QuickTime™ (Apple Computer Inc.)

Web site	http://www.apple.com
phone	800-692-7753
hours	7 days a week, 24 hours a day

EarthLink™ Network Total Access (EarthLink Network Inc.)

Web site	http://support.earthlink.net
e-mail	support@earthlink.net
phone	800-890-5128, 800-890-6356
hours	7 days a week, 24 hours a day

PC-Cillin® 2000 (Trend Micro, Inc.)

Web site	http://www.antivirus.com/pc-cillin/
phone	949-387-7800
e-mail	support@trendmicro.com
hours	M - F 8 AM - 5 PM (PST)

Quicken® (Intuit Inc.)

Web site	http://www.intuit.com/support
phone	800-644-3193
hours	7 days a week, 24 hours a day

RealPlayer (Real Networks, Inc.)

Web site(s)	http://service.real.com/rjoptions.html http://service.real.com/help/call.html

Sony ScreenBlast™ ACID, Sony ScreenBlast™ Sound Forge® (Sony Pictures Digital Entertainment)

Web site	http://www.sonicfoundry.com/support
e-mail	support@sonicfoundry.com
phone	900-407-6642 (fee-based support)
fax	608-256-7300
hours	M-F, 9 A.M.-5 P.M. (central time)

Sony Applications (Sony Electronics Inc.)

Web site	http://www.sony.com/pcsupport
phone	888-4-SONY-PC (888-476-6972)*
hours	7 days a week, 24 hours a day

* Support from 1-888-4-SONY-PC is free of charge for 90 days after the original date of purchase.

Windows® Operating System, Word (Microsoft Corp.)

Web site	http://www.sony.com/pcsupport
phone	888-4-SONY-PC (888-476-6972)*
hours	7 days a week, 24 hours a day

* Support from 1-888-4-SONY-PC is free of charge for 90 days after the original date of purchase.

WinDVD® (InterVideo, Inc.)

Web site	http://www.intervideo.com
phone	510-651-0888

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4-SONY-PC (1-888-476-6972) or find Sony Computing Service on the Web at: http://www.sony.com/pcsupport.

Using the Recovery CDs

This section provides you with details on your Sony Application Recovery and System Recovery CDs.

- Application and System Recovery CDs
- Using Your Recovery CDs

Application and System Recovery CDs

Your computer comes with the following Application Recovery and System Recovery CDs. You will need an optical disc drive (supplied with selected models) to use these recovery CDs. If your computer does not come with an optical disc drive, use an external optical disc drive.

Application Recovery CD(s)
Sony Electronics Inc.
This CD enables you to reinstall individual applications and device drivers if they become corrupted or are erased.

System Recovery CD(s)
Sony Electronics Inc.
This CD enables you to restore the operating system and software that shipped with your computer if they become corrupted or are erased. This CD restores your computer to its original factory settings, so user data and applications installed since you started using your computer will be lost.

✍ For models that come with a docking station, make sure you connect the docking station to the computer before using the recovery CDs.

Using Your Recovery CDs

The following sections describe how to use the Application Recovery and System Recovery utilities.

Using the Application Recovery CD(s)

The Application Recovery CD utility enables you to reinstall individual software applications, device drivers, and to repair software applications if they become corrupted or are erased. Reinstalling an individual software application or device driver may correct a problem you are experiencing with your computer, peripheral hardware, or software. You may not need to reinstall the entire contents of your hard drive. To reinstall all the software titles that shipped with your computer, use the System Recovery CD(s). See "Using the System Recovery CD(s)" for more information.

✍ You must be in Windows® to run the Application Recovery CD utility.

To reinstall software applications using the Application Recovery CD(s)

1. Turn on your computer. If your computer is already on, close all open applications.
2. When the Windows desktop appears, insert Sony Application Recovery CD No. 1 into your computer's optical disc drive. The Application Recovery utility loads automatically.
3. When the Application Recovery menu appears, select the icon for the application you want to restore, and then follow the on-screen instructions to complete the recovery process.

✍ Your system may include one or more Application Recovery CDs. If you have more than one Application Recovery CD, insert the first CD to run the Application Recovery program. You may be prompted to insert the next CD, depending on the application you wish to restore.

To reinstall device drivers using the Application Recovery CD(s)

1. Turn on your computer. If your computer is already on, close all applications.
2. When the Windows desktop appears, insert Application Recovery CD No. 1 into the optical disc drive.
3. Click Start in the Windows taskbar, and click Control Panel. The Control Panel window appears.
4. Click Performance and Maintenance, and click System. The System Properties dialog box appears.
5. From the Hardware tab, click Device Manager.
6. Click to select the unknown device or the device that requires the driver installation. The unknown device(s) is identified by a yellow question mark.
7. From the Action menu, click Uninstall. This removes the device driver from your system. Click OK. Repeat for each device driver as necessary.
8. Restart your computer. Click Start in the Windows taskbar, select Turn Off Computer, and then click Restart.

When the desktop appears, Windows automatically reinstalls the device driver(s) from the Application Recovery CD.

✍ Your system includes one or more Application Recovery CDs. Insert Application Recovery CD No. 1, to start the application or driver recovery process. You are prompted to insert the next CD(s), depending on the software application or driver you wish to restore.

If you have any questions about using the Application Recovery CD(s), visit http://www.sony.com/pcsupport, or contact Sony Customer Support at 1-888-4-SONY-PC.

Using the System Recovery CD(s)

The System Recovery CD(s) enables you to format your hard disk drive and restores all original software applications. Your computer is returned to the original factory settings.

> ⚠ **The System Recovery process removes all software that you may have installed since you started using your computer. Reinstall any applications that were not included with the computer when you purchased it.**

You can use the System Recovery CD(s) to reinstall the operating system and software titles that shipped with your computer if they become corrupted or are erased. You may not need to reinstall the entire contents of your hard drive. If you experience a problem with your computer, reinstalling an individual device driver or software title may correct the problem. Use the Application Recovery CD(s) to reinstall individual applications and to reinstall device drivers. See "Using the Application Recovery CD(s)" for more information.

The System Recovery CD(s) contains a backup copy of all the software originally installed on your hard disk drive. It can be used only to recover the hard disk of the computer you purchased.

System Recovery options

- **System Drive Recovery —** All data on Drive C is deleted. The factory default settings and software applications are restored on this drive only.
- **Change Partition Size —** All partitions, custom installations, and changes are removed from the hard disk drive. You can set the partition sizes for both the Drive C and Drive D. The original, preinstalled operating system and software applications are restored.
- **Recovery to Original Factory Defaults —** All data and partitions are removed from the hard disk drive. All original factory settings, operating system, and preinstalled software is restored.

> ⚠ **The System Recovery utility does not back up your system's data. If you wish to retain your system data, perform a backup to an external media.**

To use the System Recovery CD(s)

Your system may take a few minutes to load necessary files. A blue screen appears during the downloading process.

1. Insert the Sony System Recovery CD in the optical disc drive. The System Recovery utility starts from the optical disc drive. The first CD must be in the drive when your turn on the computer.
2. Shut down your computer as described in the "Shutting Down Your Computer" section of your supplied Quick Start.
3. Wait 30 seconds and turn on your computer.
4. The VAIO System Recovery Utility dialog box appears. Click Next.
5. At the pop-up prompt, select Yes to begin the system recovery process. Follow the on-screen instructions.

If your computer does not start from the Recovery CD

1. Press the power button and hold it for more than four seconds to turn off the computer.
2. Turn on the computer. When the Sony logo is displayed, press the F2 key. The BIOS setup menu screen appears.
3. Press the arrow keys to select the Exit menu.
4. Press the arrow keys to select "Get Default Values" and then press the Enter key. The message "Load default values for all SETUP items." appears.
5. Make sure "Yes" is selected, and press the Enter key.
6. Press the arrow keys to select "Save and Exit," and press the Enter key. The message "Save configuration changes and exit now?" appears.
7. Make sure "Yes" is selected, and press the Enter key. The computer restarts from the Recovery CD.

✍ Your system may include one or more System Recovery CDs. If you have more than one System Recovery CDs, insert the first CD to run the System Recovery program. You are prompted to insert the second CD once the information from the first CD has been installed.

The recovery process takes from 30 to 60 minutes to complete.

After recovering your system using the System Recovery CD(s), you may be prompted to insert your Application Recovery CD(s) after restarting Windows. Insert the Application Recovery CD to automatically complete recovery of your system.

Troubleshooting

This section describes how to solve common problems you may encounter when using your computer. Many problems have simple solutions, so try these suggestions before you contact Sony Computing Support (http://www.sony.com/pcsupport). Consult the following sections:

- Troubleshooting Your Computer
- Troubleshooting the LCD Screen
- Troubleshooting the Mouse and Touchpad
- Troubleshooting Drives, PC Cards, and Peripheral Devices
- Troubleshooting the Software
- Troubleshooting i.LINK Devices
- Troubleshooting the Modem
- Troubleshooting Audio
- Troubleshooting Memory Stick Media
- Troubleshooting Wireless LAN functions
- Troubleshooting the Printer

Troubleshooting Your Computer

My computer does not start.

- ❑ Make sure the computer is plugged into a power source and is turned on.
- ❑ Make sure the power indicator shows the power is on.
- ❑ Make sure the battery packs are inserted properly and are charged.
- ❑ If you are connected to a docking station with a floppy disk drive or an external floppy disk drive, make sure the floppy disk drive is empty.
- ❑ Make sure the power cord and all cables are connected firmly. See "Connecting a Power Source" for more information.
- ❑ If the computer is plugged into a power strip or uninterruptible power supply (UPS), make sure the power strip or UPS is turned on and working.
- ❑ If you are using an external display, make sure it is plugged into a power source and turned on. Make sure the brightness and contrast controls are adjusted correctly. See the manual that came with your display for details.
- ❑ Take the battery pack off the computer, unplug the power cord and plug it in again. Turn on the power.
- ❑ If the power control button does not function, remove the AC adapter and battery pack. Wait one minute, and reattach them. Press the power button.
- ❑ Condensation may cause the computer to malfunction. If this occurs, do not use the computer for at least one hour.
- ❑ Unplug the power cord, press the reset button by using a thin, straight object (such as a paper clip), remove the battery pack, plug it in again and turn on the power.

My computer starts but a BIOS error appears.

When the internal backup battery is low on power, your system may not start properly, and the message "Press <F1> to resume, <F2> to setup" may appear at the bottom of the screen. Follow these steps:

1 Press F2. The BIOS Setup menu appears.

2 Set the date (month/day/year) next to System Date.

3 Press the Down Arrow ↓ key to select System Time, and then set the time (hour: minute: second).

4 Press the Right Arrow → key to select the Exit tab, and then press the Down Arrow ↓ key to select Get Default Values. The message "Load default values for all SETUP items" appears.

5 Press Enter. The Setup Confirmation window appears.

6 Make sure Yes is selected, and press Enter.

7 Make sure Exit (Save Changes) is selected, and press Enter. The Setup Confirmation window appears.

8 Make sure Yes is selected, and press Enter. The computer restarts.

✍ If this occurs on a regular basis, contact Sony Computing Support (http://www.sony.com/pcsupport).

My computer starts, but the message "Operating system not found" appears, and Windows does not start.

- ❑ If you have connected a docking station with a floppy disk drive or an external floppy disk drive, make sure there is no disk in the floppy disk drive (non-bootable).
- ❑ If a non-bootable floppy disk is in the drive, follow these steps:
  1. Turn off the computer, and remove the floppy disk.
  2. Restart the computer and confirm that the Windows® operating system starts properly.
- ❑ If Windows still does not start, follow these steps to start the BIOS:
  1. Remove any floppy disk from the floppy disk drive.
  2. Turn off the computer.
  3. Remove any peripheral devices connected to the computer.
  4. Restart the computer.
  5. Press F2 when the Sony logo appears. The BIOS setup menu window appears.
  6. Press the Right Arrow → key to select the Exit menu.
  7. Press the Down Arrow ↓ key to select Get Default Values, and then press Enter. The message "Load default values for all SETUP items" appears.

8 Press Enter. The Setup Confirmation window appears.

9 Make sure Yes is selected, and press Enter.

10 Make sure Exit (Save Changes) is selected, and press Enter. The Setup Confirmation window appears.

11 Make sure Yes is selected, and press Enter. The computer restarts.

If your computer continues to display the message "Operating system not found," and Windows does not start, use your supplied System Recovery CD(s) to restore the software titles shipped with your computer. See "Using the System Recovery CD(s)" for more information.

The System Recovery CD restores your computer to its original state, so user data and applications will be lost.

My computer stops responding or does not shut down.

It is best to turn off your computer using the Turn Off Computer command on the Windows Start menu. Using other methods, including those listed below, may result in loss of unsaved data.

- Click Start on the Windows® taskbar, select Turn Off Computer, and then click Turn Off.
- If your computer does not turn off, press Ctrl+Alt+Delete simultaneously and click Turn Off Computer on the Windows Task Manager dialog box.
- If your computer still does not turn off, press and hold the power button for at least four seconds to turn off the power.
- Unplug the computer from the AC adapter, and remove the battery pack from your computer.
- If your computer stops responding while playing a CD or DVD, press Ctrl+Alt+Delete simultaneously, and click Turn Off Computer on the Windows Task Manager dialog box.

Pressing the Ctrl+Alt+Delete keys simultaneously or turning off the computer with the power button may result in data loss in files that are currently open.

The power management does not respond.

Your computer's operating system may become unstable if a lower power state, such as Hibernate, is initiated and changed before the computer completely enters the lower power state.

To restore the computer to its normal operating stability

1. Close all open applications.
2. Restart the computer by pressing Ctrl+Alt+Delete simultaneously and clicking Restart on the Windows Task Manager dialog box.
3. If this procedure does not work, press and hold the power button for four seconds or longer to turn off the computer.

The sound of my computer's fan is too loud.

Use the PowerPanel™ utility to change the Thermal Control Strategy setting to Quiet. This setting slows down the CPU speed. See PowerPanel Help for more information.

To reduce fan noise

1. Right-click the CPU: Performance Profile ↓ icon on the taskbar, and select Edit/Create Profiles. The AC Power Profile Editor window appears.
2. Double-click System to open the file if it isn't already opened.
3. Double-click Thermal Control Strategy - Performance, and select Quiet.
4. Restart your computer.

Why does the System Properties dialog box display a slower CPU speed than advertised?

This is normal. Because your computer's CPU uses a type of CPU speed controlling technology, System Properties may display the CPU's current speed instead of the maximum advertised speed.

Troubleshooting the LCD Screen

My LCD screen is blank.

- ❑ Verify the computer is plugged into a power source and is turned on.
- ❑ Verify the power indicator on the computer is on.
- ❑ Verify the battery packs are inserted properly and are charged.
- ❑ The computer may be in LCD (Video) Standby mode. Press any key to activate the screen.
- ❑ The display mode may be set to external display mode. Press and hold the Fn key while pressing F7 several times.

My LCD screen continues to show the previous screen.

Press the Windows key and D twice to refresh the screen.

The image on my connected external display is not centered or sized properly.

Use the controls on your external display to adjust the image. See the manual that came with your display for more information.

I want to change the video resolution of my display.

1 Click Start on the taskbar, and then Control Panel.

2 Click Appearance and Themes, and then click the Display icon. The Display Properties dialog box appears.

3 Click the Settings tab.

4 Move the Screen resolution slider to change your video resolution.

Troubleshooting the Mouse and Touchpad

My mouse does not work.

- Make sure the mouse is securely plugged into the USB port. See "Connecting a USB Mouse" for more information.
- If you are still experiencing problems, use your supplied Application Recovery CD to reinstall the mouse drivers. See "Using the Application Recovery CD(s)" for more information.

My touchpad does not work properly.

- You may have disabled the touchpad without connecting a mouse to the computer. To enable the touchpad:
  1. Press the Windows key, and then press the Up Arrow ↑ key to select All Programs. Press Enter.
  2. Press the Down Arrow ↓ key to select Sony Notebook Setup, and press Enter.
  3. Make sure Sony Notebook Setup is selected, and press Enter.
  4. Press the Right Arrow → key to select the Touchpad tab.
  5. Press the Tab key to select Enable Touchpad, and press Enter.
- Restart the computer to activate the touchpad again.
- If your touchpad is interpreting a single tap as a double-click, adjust the button assignments. Follow these steps:
  1. Press the Windows key, and then press the Up Arrow ↑ key to select All Programs. Press Enter.
  2. Press the Down Arrow ↓ key to select Sony Notebook Setup, and press Enter.
  3. Make sure Sony Notebook Setup is selected, and press Enter.
  4. Press the Right Arrow → key to select the Touchpad tab, and press Alt+S simultaneously.
  5. Make sure the Buttons tab is open, and press the Up Arrow ↑ and Down Arrow ↓ keys to change the button assignments.
  6. Press Enter to save your changes and close the dialog box.

- If you are still experiencing problems, check that another mouse was not installed.
- You may need to use your Application Recovery CD(s) to reinstall the mouse drivers. See "Using the Application Recovery CD(s)" for more information.

The pointer does not move when I use the Touchpad or Mouse.

- You should restart your computer. Follow these steps:
  1. Press the Windows key.
  2. Press U. The Turn off computer window appears.
  3. Press R to restart the computer.
- If the computer does not restart,
  1. Press Ctrl+Alt+Delete simultaneously. The Windows Task Manager dialog box appears.
  2. Press Alt to highlight the menu bar, and press the Right Arrow ➔ key to select Shut Down.
  3. Press Enter.
  4. Press R to restart the computer.
- If you still cannot restart your computer, press and hold the power button for more than four seconds to turn off the computer.
- If the pointer does not move while playing a disc, press Ctrl+Alt+Delete simultaneously to stop playback. Restart the computer by pressing Alt+U to display the Shut Down menu, and press R to restart the computer.
- If you are still experiencing problems, make sure another mouse was not installed.
- You may need to use your supplied Application Recovery CD(s) to reinstall the touchpad or mouse drivers. See "Using the Application Recovery CD(s)" for more information.

Troubleshooting Drives, PC Cards, and Peripheral Devices

My floppy disk drive icon doesn't appear even though it is connected.

- Make sure the floppy disk drive is properly connected. Wait a few moments for the computer to recognize the drive.
- Close all open applications, and make sure there is no disk in the floppy disk drive. Restart your computer with the connected floppy disk drive.

My floppy disk drive cannot write to a floppy disk.

- If the floppy disk is write-protected, disable the write-protect feature or use a floppy disk that is not write-protected.
- Make sure a formatted floppy disk is properly inserted into the floppy disk drive.

My optical drive is not playing my CD or DVD properly.

- Make sure the disc label is facing up.
- If the disc requires software, make sure the software is installed according to the manufacturer's instructions.
- A dirty or damaged disc may cause the computer to stop responding while it tries to read the disc. If necessary, restart the computer, remove the disc, and check the disc for dirt or damage.
- If you see video but cannot hear audio, do the following:
  - Make sure your optical drive does not have the mute setting enabled.
  - Check the volume setting in the audio mixer.
  - If you are using external speakers, check the volume settings, and then check the connections between your external speakers and the computer.
  - Click Start on the taskbar, and then Control Panel, Performance and Maintenance, and System. Select the Hardware tab, and click Device Manager. Make sure the correct drivers are properly installed.
- Do not use adhesive labels to identify the CD. The label may come off while the disc is in use in the optical drive and cause the drive to malfunction.

- If a region code warning appears when you try to use your optical drive, it may be that the DVD you are trying to play is incompatible with the optical drive. Verify the region code listed on the DVD package.
- Condensation may cause the computer to malfunction. If this occurs, do not use it for at least one hour.
- Make sure the digital CD audio is enabled for your optical drive. Follow these steps:

  1 Click Start on the taskbar, and then Control Panel, Performance and Maintenance, and System. The System Properties dialog box appears.

  2 Select the Hardware tab, and then click Device Manager. The Device Manager dialog box appears.

  3 Double-click the listed DVD/CD-ROM drive. The Properties window opens.

  4 Click the Properties tab, and then select the "Enable digital CD audio for this CD-ROM device" check box.

Why does it take longer for the optical disc drive to read some types of CDs?

The reading speed for a CD-RW is slower than the reading speed for a CD-ROM or CD-R because these discs are formatted differently.

My optical drive tray does not open.

- Make sure the computer is turned on.
- Press the Eject button on the optical drive.
- If the Eject button does not work, open the tray by inserting a thin, straight object (such as a paper clip) in the hole to the right of the Eject button.

I cannot use Digital Video (DV) devices. The message "DV equipment seems to be disconnected or turned off" appears.

- Make sure the DV device is turned on and the cables are properly connected.
- If you are using multiple i.LINK®* devices, the combination of the connected devices may cause unstable operation. Follow these steps:

  1 Turn off your computer and all connected devices.

2 Disconnect the devices that are not in use.

3 Ensure that all other devises are properly connected.

4 Restart your computer.

- ❑ Disconnect the i.LINK® cable and connect it again.

My PC Card does not work.

- ❑ Make sure the PC Card is installed properly.
- ❑ Make sure the PC Card is compatible with the Microsoft® Windows® operating system.
- ❑ Use the Sony Notebook Setup utility to disable devices you are not currently using.
- ❑ Make sure any necessary drivers were installed properly. See "Using the Application Recovery CD(s)" for more information.

* i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Troubleshooting the Software

My software program stops responding or crashes.

Contact the software publisher or designated provider for technical support. See "Software Support Information" for contact information.

When I click an application icon, the message "You must insert the Application CD into your optical drive" appears, and the software does not start.

- Some titles require specific files that are located on the Application Recovery CD. Insert the disc, and try starting the program again.
- Make sure you place the CD in the tray with the label side facing up.
- Make sure the optical drive is connected to your computer. See "Connecting an i.LINK Optical Disc Drive" for more information.

The application cannot find a file while a PC Card is inserted.

When inserted into a computer that is connected to the docking station, some PC Cards may change the drive letters of the disk drives in the docking station. If this occurs, an application you are using may not be able to find files.

To correct this condition, do one of the following:

- Remove the PC Card, and restart your computer. Do not insert the PC Card while using that application.
- Change the drive letters of the disk drives of the docking station or of the PC Card. Refer to the Windows® help files or the application manuals to change the drive letters.

What software do I use for CD-R/CD-RW software functions?

Use the preinstalled SonicStage software's Record function to create CDs on your VAIO® computer, if the specific model you purchased is preconfigured with all of the necessary components for CD-R and CD-RW capability.

I cannot use the DVgate software.

If your computer is using the Ultimate Battery Life profile for its power saving mode, you cannot use DVgate™ or Smart Connect software. Please select another profile. Preferably, connect your computer to AC power when using these features.

Troubleshooting i.LINK Devices

I cannot establish a connection between two VAIO computers when using an i.LINK cable.

1 Disconnect the i.LINK®* cable from both computers and reconnect it.

2 Wait for the computers to respond. If neither computer responds after a few moments, restart both computers.

✍ The computers may not recognize an i.LINK connection after returning from a power saving mode (Standby or Hibernate). If that happens, restart both computers to establish a connection.

* i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Troubleshooting the Modem

My modem does not work.

- Make sure the telephone cable is plugged into the cable jack. See "Connecting a Phone Line" for more information.
- Make sure the telephone cable is working by plugging the cable into an ordinary telephone and listening for a dial tone.
- Make sure the telephone number the program is dialing is correct.
- Make sure the software you are using is compatible with the computer's modem. (All preinstalled Sony programs are compatible.)
- If you are still experiencing problems, use the supplied Application Recovery CD(s) to reinstall the modem drivers. See "Using the Application Recovery CD(s)" for more information.

My modem connection is slow.

Your computer is equipped with a V.90 compatible modem. Many factors may influence modem connection speed, including telephone line noise or compatibility with telephone equipment (such as fax machines or other modems). If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet service provider (ISP), do the following:

- Ask your telephone company to verify your telephone cable is free of any line noise.
- If your problem is fax-related, make sure there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- If you are having a problem connecting with your ISP, make sure the ISP is not experiencing technical problems.
- If you have a second telephone line available, try connecting the modem to that line.

Troubleshooting Audio

My speakers have no sound.

- If the built-in speakers are turned off, press Fn+F3 or use the center Jog Dial™ Control to turn on the speakers.
- If the speaker volume is turned to the minimum, press Fn+F4, and then press Up Arrow ↑ or Right Arrow → keys to increase the volume. You can also use the center Jog Dial Control to adjust the volume.
- If nothing is displayed when you press Fn+F3 or Fn+F4, follow these steps:

  1 Right-click the Volume → icon on the taskbar, and select Adjust Audio Properties.

  2 Select the Audio tab, and click Advanced in the Sound Playback box. The Advanced Audio Properties dialog box appears.

  3 Make sure the Speakers tab is open and the correct speaker setup is selected in the Speaker Setup box.

- Check the volume controls in the Windows® taskbar.

  1 Right-click the Volume → icon on the taskbar, and select Open Volume Control. The Volume Control dialog box appears.

  2 Make sure the mute check boxes are not selected. If they are selected, click the check box to cancel the selection.

  3 Close the Volume Control dialog box.

- Make sure the CD audio enable is turned on

  1 Click Start on the Windows® taskbar, and then Control Panel.

  2 Click Performance and Maintenance, and then System. The System Properties dialog box appears.

  3 Select the Hardware tab, and then click Device Manager. The Device Manager dialog box appears, listing your computer hardware devices.

  4 Double-click DVD/CD-ROM drives.

  5 Double-click the listed drive name.

  6 Click the Properties tab.

7 If the "Enable digital CD audio for this CD-ROM device," check box is not selected, click it to turn it on.

- ❑ If your computer is powered by batteries, make sure the battery packs are properly inserted and are charged.
- ❑ If you are using an application that has its own volume control, verify the volume is turned up.
- ❑ If you connect external speakers:
  - ❑ Make sure the speakers are properly connected and the volume is turned up loud enough to hear sound.
  - ❑ If the speakers have a mute button, make sure the button is off.
  - ❑ If the speakers are powered by batteries, make sure the batteries are inserted properly and are charged.
- ❑ If you have connected an audio cable to the Headphone jack, disconnect the cable.
- ❑ If you are still experiencing problems, use the Application Recovery CD(s) to reinstall the drivers. See "Using the Application Recovery CD(s)" for more information.

There is noise distortion while listening to music with USB speakers or USB headphones.

Use the preinstalled PowerPanel™ software to set the CPU control to Performance. Follow these steps:

1 Right-click the CPU: Performance Profile icon on the bottom right of the taskbar, and click Edit/Create Profiles. The AC Power Profile Editor dialog box appears.

2 In the left portion of the window, click the power management profile you want to set. Maximum Battery Life is the default selection when your computer runs on battery power.

3 In the right portion of the window, double-click CPU Control in the System folder. A CPU control options list appears.

4 Click Performance.

5 Click the File menu, and select Save.

6 Close the AC Power Profile Editor window.

My microphone does not work.

If you are using an external microphone, make sure the microphone is plugged into the Microphone jack. See “Connecting an External Microphone” for more information.

Troubleshooting Memory Stick Media

I cannot open image files.

- If the Sony MemoryStick dialog box does not appear when you first insert a Memory Stick media, you can:

  1 Click Start, and then My Computer. The My Computer window appears.

  2 Click the Sony MemoryStick icon. If your images are not stored in a folder, your images should appear in the Sony MemoryStick window. Click the Left or Right arrows to view images. If your images are stored in a folder, open the folder to view your images.

- The format of your Memory Stick media may not be compatible with the software you are using to view your image files. When you reformat your Memory Stick media, you lose the images and data stored on that media. Copy the data from the Memory Stick media onto the hard disk drive of your computer to save your images and data. Reformat the Memory Stick media using Memory Stick Formatter software preinstalled on your computer.

Memory Stick media does not work. I cannot access the removable drive.

To locate the Memory Stick media icon in your My Computer folder

1 Click the View menu, and select Refresh.

2 Wait a few moments for the computer to recognize the Memory Stick media.

3 Click the Sony MemoryStick icon.

Troubleshooting Wireless LAN functions

The computer cannot connect to a Wireless LAN Access Point.

Connection availability is affected by distance and obstructions. You may need to move your computer away from obstructions or closer to any access point you may be using.

- ❑ Make sure the Wireless LAN switch on the computer is in the ON position or the Wireless LAN PC Card is properly inserted.
- ❑ Make sure power to the access point is on.
- ❑ Make sure the access point is displayed in the "Available networks" window.

  1 Click Start, and select Control Panel.

  2 Click Network and Internet Connections, and then Network Connections.

  3 Right-click Wireless Network Connection, and select Properties. The Wireless Network Connection Properties dialog box appears.

  4 Select the Wireless Networks tab, and check if the access point is displayed in the Available networks box.

- ❑ Make sure the encryption key is correct.

I cannot access the Internet.

- ❑ Make sure the Wireless LAN switch on the computer is in the ON position or the Wireless LAN PC Card is properly inserted.
- ❑ Check the access point settings. Refer to the instructions supplied with the access point.
- ❑ Check if your computer and the access point are connected to one another.
- ❑ Move your computer away from obstructions or closer to any access point you may be using.

The data transfer speed is slow.

- ❑ The Wireless LAN data transfer speed is affected by distance and obstructions between devices and access points. Other factors include device configurations, radio conditions, and software compatibility. To maximize

the data transfer speed, move your computer away from obstructions or closer to any access point you may be using.

- If you are using a Wireless LAN Access Point, the device may be temporarily overloaded depending on the number of other devices communicating via the access point.
- If your access point interferes with other access points, change the access point channel. See your access point instructions for more information.

The communication speed is interrupted or slowed down when MPEG2 data is transferred.

The typical effective data transfer speed via an access point is 4-5 Mbps when adhering to the IEEE 802.11b standard. High-rate stream transfers with MPEG2 data may lower this rate.

Data transfers are interrupted.

Data transfer interruptions may occur with large files or use of microwaves and cordless telephones when connected to an access point.

To avoid data transfer interruptions

- Move the computer closer to the access point.
- Make sure the access point connection is intact.
  - Right-click the Wireless Network Connection icon on the taskbar, and click Status. The Wireless Network Connection Status dialog box appears.
- Change the access point channel. See your access point instructions for more information.

Troubleshooting the Printer

I cannot print.

- ❑ Make sure the printer is on, and the printer cable is securely connected to both the printer and your computer.
- ❑ Make sure the printer is compatible with the Windows® operating system installed on your computer and that it has the correct printer drivers.
- ❑ Your connected printer may not function after the computer resumes from a power saving mode.
- ❑ The default setting for the printer port mode is correct for most printers. If you cannot print, try changing the printer port number.

  1 Click Start on the Windows taskbar, and then Control Panel.

  2 Click Performance and Maintenance, and then System. The System Properties dialog box appears.

  3 Select the Hardware tab, and click Device Manager. The Device Manager dialog box appears.

  4 Double-click Ports (COM&LPT), and then ECP Printer Port (LPT1).

  5 Select the Port Settings tab, and choose a different LPT Port Number.

To reset the printer connection

1 Click Start on the taskbar, and select Control Panel.

2 Click Printers and Other Hardware, and then click Printers and Faxes.

3 Right-click on the icon of the printer that is not functioning, and select Properties to open the Properties window.

4 Click OK.

Getting Help

Sony provides you with several support resources to answer questions about your VAIO® computer or the preinstalled software. Refer to these resources in the order they are listed.

Support Options

If you have questions about your computer or the preinstalled software, refer to the following sources for answers in the sequence listed below.

1	**VAIO® Computer User Guide** The online VAIO® Computer User Guide and the printed VAIO® Computer Quick Start provide you with information on how to maximize your computer capabilities and solve common problems.
2	**Software Manuals and Online Help Files** The software preinstalled on your computer may come with an online manual. These manuals are stored on the hard disk drive as online Help files. You can find the Help files from the Help menu under the specific software application. Some software applications may come with a printed manual.
3	**Operating System Online Support** Your computer comes preinstalled with Microsoft® Windows®. For operating system support, you can access Microsoft® customer support at: http://support.microsoft.com/directory/.

4 **VAIO Support Agent**
You can find VAIO Support Agent by clicking Start and selecting Help and Support. Using advanced diagnostic technology, Sony's VAIO Support Agent runs scheduled protections of your applications, network settings, and other important software settings. When your software is protected, you can use VAIO Support Agent to repair software problems by restoring your software to any of the previously protected states.

5 **Sony Computing Support**
This service provides instant access to information on commonly encountered problems. Enter a description of your problem and the Knowledge Database searches for the corresponding solutions online. You can access Sony Computing Support at: http://www.sony.com/pcsupport.

6 **Sony Fax-on-Demand**
This service, which requires a fax machine or your fax software, provides answers to commonly asked questions. You can use this automated service to request a list of available topics, and select the topics that you want to receive. To contact the Sony fax-on-demand service, call: 1-888-4-SONY-PC (1-888-476-6972).

7 **Sony Customer Support**
Sony and Microsoft software support is available free of charge for 90 days after the original date of purchase. You can call and speak with a Sony Customer Support Representative without using your computer by calling: 1-888-4-SONY-PC (1-888-476-6972).

8 **Sony Service Center**
For the Sony Service Center nearest you, call 1-888-4-SONY-PC (1-888-476-6972) or find Sony Customer Service on the Web at http://www.sony.com/pcsupport.

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